



### LED-Reflektor, 2 W

- LED-Glühbirne mit 36°-Abstrahlwinkel und GU4-Sockel
- warmweißes Licht mit 3000 K
- als Ersatz für Glühbirnen oder Halogenlampen in Einbauspots, Deckenstrahlern und Einbaustrahlern
- liefert eine unverfälschte und natürliche Farbwiedergabe dank 80 Ra
- hat eine geringe Wärmeentwicklung und ist beim Einschalten sofort hell
- mattiert
- mit sehr hoher Lebensdauer
- nicht dimmbar

### LED Reflector Lamp, 2 W

- LED light bulb with 36° beam angle and GU4 base
- warm white light with 3000 K
- as a replacement for light or halogen bulbs in recessed spotlights and ceiling spotlights
- produces true, natural colours thanks to 80 Ra
- has low heat generation and immediately lights up when switched on
- frosted
- with very long service life
- not dimmable

#### Änderungen

| Datum | Name | gez.:                                      | Datum      | Name |
|-------|------|--------------------------------------------|------------|------|
|       |      | gez.:                                      | 22.03.2023 | aw   |
|       |      | gepr.:                                     | 22.03.2023 | aw   |
|       |      | Norm:                                      |            |      |
|       |      | Änderungen vorbehalten / Subject to change |            |      |

Bezeichnung

LED Reflektor MR11 GU4 warm-weiß  
2W 180lm 36°

Zeichnungs-Nr.:

45608

**goobay®**  
by Wentronic GmbH  
Pillmannstraße 12  
38112 Braunschweig  
Germany

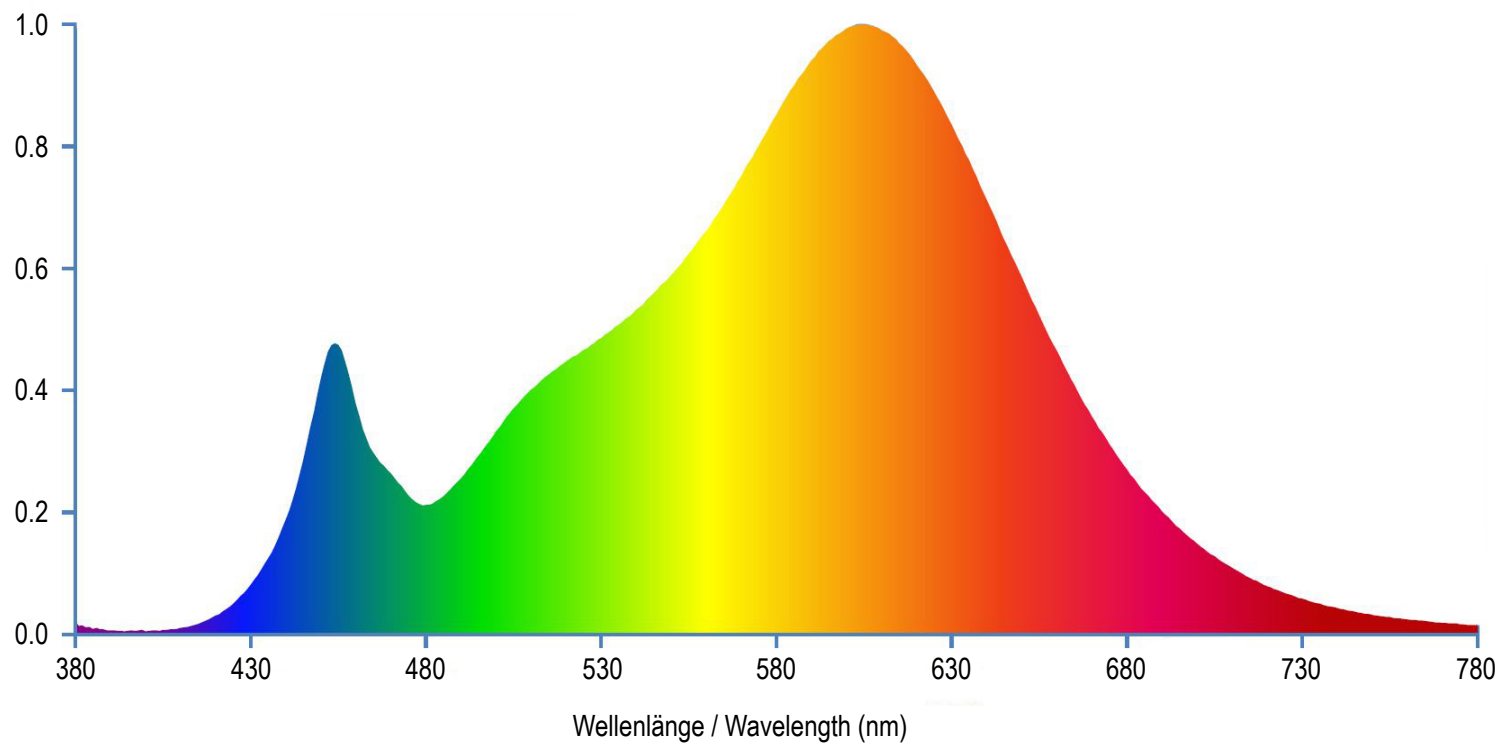
Blatt

**1/3**

von

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1                                                                                                                                                                                                                                                                                                                              | 2    | 3      | 4          | 5                                          | 6                                                                     | 7                                                                                                                                                                                                                                                                    | 8                                                                                                  | 9                                                                                                              | 10 | 11    | 12                            | 13 | 14 |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Lichtquellentyp / Type of light source</b>                                                                                                                                                                                                                                                                                  |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      | <b>Parameter für Lichtquellen mit gebündeltem Licht / Parameters for directional light sources</b> |                                                                                                                |    |       |                               |    |    | A          |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Verwendete Beleuchtungstechnologie / Lighting technology used                                                                                                                                                                                                                                                                  |      |        |            |                                            | LED                                                                   | Spitzenlichtstärke (cd) / Peak luminous intensity (cd)                                                                                                                                                                                                               |                                                                                                    |                                                                                                                |    |       | 427                           |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ungebündeltes oder gebündeltes Licht / Non-directional or directional [NDLS/DLS]                                                                                                                                                                                                                                               |      |        |            |                                            | DLS                                                                   | Halbwertswinkel in Grad oder Spanne der einstellbaren Halbwertswinkel / Beam angle in degrees, or the range of beam angles that can be set                                                                                                                           |                                                                                                    |                                                                                                                |    |       | 36                            |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Netzspannung/Nicht direkt an die Netzspannung angeschlossen / Mains or non-mains [MLS/NMLS]                                                                                                                                                                                                                                    |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      | NMLS                                                                                               | <b>Parameter für LED- und OLED-Lichtquellen / Parameters for LED and OLED light sources</b>                    |    |       |                               |    |    |            | B |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Vernetzte Lichtquelle (CLS) / Connected light source (CLS)                                                                                                                                                                                                                                                                     |      |        |            |                                            | Nein / No                                                             | Wert des R9-Farbwiedergabeindex / R9 colour rendering index value                                                                                                                                                                                                    |                                                                                                    |                                                                                                                |    |       | 9                             |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Farblich abstimmbare Lichtquelle / Colour-tuneable light source                                                                                                                                                                                                                                                                |      |        |            |                                            | Nein / No                                                             | Lebensdauerfaktor / Survival factor                                                                                                                                                                                                                                  |                                                                                                    |                                                                                                                |    |       | 1.00                          |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Hülle / Envelope                                                                                                                                                                                                                                                                                                               |      |        |            |                                            | Keine Hülle / No envelope                                             | Lichtstromerhalt / The lumen maintenance factor                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       | 0.97                          |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Lichtquelle mit hoher Leuchtdichte / High luminance light source                                                                                                                                                                                                                                                               |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      | Nein / No                                                                                          | <b>Parameter für LED- und OLED-Netzspannungslichtquellen / Parameters for LED and OLED mains light sources</b> |    |       |                               |    |    |            | C |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Blendschutzschild / Anti-glare shield                                                                                                                                                                                                                                                                                          |      |        |            |                                            | Nein / No                                                             | Verschiebungsfaktor (cos φ1) / Displacement factor (cos φ1)                                                                                                                                                                                                          |                                                                                                    |                                                                                                                |    |       | 0.96                          |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Dimmbar / Dimmable                                                                                                                                                                                                                                                                                                             |      |        |            |                                            | Nein / No                                                             | Farbkonsistenz in MacAdam-Ellipsen/ Colour consistency in McAdam ellipses                                                                                                                                                                                            |                                                                                                    |                                                                                                                |    |       | 1                             |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Allgemeine Produktparameter / General product parameters</b>                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Energieverbrauch im Ein-Zustand (kWh/1000h) / Energy consumption in on-mode (kWh/1000 h)                                                                                                                                                                                                                                       |      |        |            |                                            | 2                                                                     | Angabe, ob eine LED-Lichtquelle eine Leuchtstofflichtquelle ohne eingebautes Vorschaltgerät mit einer bestimmten Leistungsaufnahme ersetzt./ Claims that an LED light source replaces a fluorescent light source without integrated ballast of a particular wattage. |                                                                                                    |                                                                                                                |    |       | —                             | D  |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Energieeffizienzklasse / Energy efficiency class                                                                                                                                                                                                                                                                               |      |        |            |                                            | F                                                                     | Falls ja, Wert der ersetzten Leistung (W) / If yes then replacement claim (W)                                                                                                                                                                                        |                                                                                                    |                                                                                                                |    |       | —                             |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nutzlichtstrom (Φuse) mit der Angabe, ob sich der Wert auf den Lichtstrom in einer Kugel (360°), in einem breiten Kegel (120°) oder in einem schmalen Kegel (90°) bezieht / Useful luminous flux (Φuse), indicating if it refers to the flux in a sphere (360°), in a wide cone (120°) or in a narrow cone (90°)               |      |        |            |                                            | 180 in einem breiten Kegel (120°) / 180 in a wide cone (120°)         | Flimmer-Messgröße (Pst LM) / Flicker metric (Pst LM)                                                                                                                                                                                                                 |                                                                                                    |                                                                                                                |    |       | 0.1                           |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ähnliche Farbtemperatur, gerundet auf die nächstliegenden 100 K, oder Spanne der einstellbaren ähnlichen Farbtemperaturen, gerundet auf die nächstliegenden 100 K / Correlated colour temperature, rounded to the nearest 100 K, or the range of correlated colour temperatures, rounded to the nearest 100 K, that can be set |      |        |            |                                            | 3000                                                                  | Messgröße für Stroboskop-Effekte (SVM) / Stroboscopic effect metric (SVM)                                                                                                                                                                                            |                                                                                                    |                                                                                                                |    |       | 0.1                           |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Leistungsaufnahme im Ein-Zustand (Pon) in W / On-mode power (Pon), expressed in W                                                                                                                                                                                                                                              |      |        |            |                                            | 2.2                                                                   | Lichtfarbe / Light colour:                                                                                                                                                                                                                                           |                                                                                                    |                                                                                                                |    |       | warm-weiß / warm white        | E  |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Leistungsaufnahme im Bereitschaftszustand (Psb) in W, auf die zweite Dezimalstelle gerundet / Standby power (Psb), expressed in W and rounded to the second decimal                                                                                                                                                            |      |        |            |                                            | —                                                                     | Bauform / Construction form:                                                                                                                                                                                                                                         |                                                                                                    |                                                                                                                |    |       | Strahler (MR11) / spot (MR11) |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Leistungsaufnahme im vernetzten Bereitschaftsbetrieb (Pnet) in W, auf die zweite Dezimalstelle gerundet / Networked standby power (Pnet) for CLS, expressed in W and rounded to the second decimal                                                                                                                             |      |        |            |                                            | —                                                                     | Lichtausbeute / Luminous efficacy:                                                                                                                                                                                                                                   |                                                                                                    |                                                                                                                |    |       | 101 lm/W                      |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Farbwiedergabeindex, auf die nächstliegende ganze Zahl gerundet, oder Spanne der einstellbaren CRI-Werte / Colour rendering index, rounded to the nearest integer, or the range of CRI-values that can be set                                                                                                                  |      |        |            |                                            | 80                                                                    | Betriebsspannung / Operating voltage:                                                                                                                                                                                                                                |                                                                                                    |                                                                                                                |    |       | 12 V ~, 50/60 Hz, 12 V ===    |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Äußere Abmessungen in mm, ggf. ohne separates Betriebsgerät, Beleuchtungssteuerungsteile und Nicht-Beleuchtungsteile / Outer dimensions without separate control gear, lighting control parts and nonlighting control parts, if any                                                                                            |      |        |            |                                            | Höhe / Height: 40 mm<br>Breite / Width: 35 mm<br>Tiefe / Depth: 35 mm | Bemessungsstrom / Rated current:                                                                                                                                                                                                                                     |                                                                                                    |                                                                                                                |    |       | 30 mA                         | F  |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Spektrale Strahlungsverteilung im Bereich 250 nm bis 800 nm bei Volllast / Spectral power distribution in the range 250 nm to 800 nm, at full-load                                                                                                                                                                             |      |        |            |                                            | Siehe Graph auf Seite 3 / See graph on the page 3                     | Schutzart / Protection level:                                                                                                                                                                                                                                        |                                                                                                    |                                                                                                                |    |       | IP20                          |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Angabe, ob äquivalente Leistungsaufnahme / Claim of equivalent power                                                                                                                                                                                                                                                           |      |        |            |                                            | —                                                                     | Lebensdauer / Lifetime:                                                                                                                                                                                                                                              |                                                                                                    |                                                                                                                |    |       | 25000 h                       |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Falls ja, Wert der äquivalenten Leistungsaufnahme (W) / If yes, equivalent power (W)                                                                                                                                                                                                                                           |      |        |            |                                            | —                                                                     | Anzahl Schaltzyklen / Number of switching cycles:                                                                                                                                                                                                                    |                                                                                                    |                                                                                                                |    |       | 12500x                        |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Farbwertanteile (x und y) / Chromaticity coordinates (x and y)                                                                                                                                                                                                                                                                 |      |        |            |                                            | x = 0.439; y = 0.404                                                  | Zündzeit / Startup time:                                                                                                                                                                                                                                             |                                                                                                    |                                                                                                                |    |       | 0.1 s                         | G  |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       | Quecksilbergehalt / Mercury content:                                                                                                                                                                                                                                 |                                                                                                    |                                                                                                                |    |       | 0 mg                          |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       | Betriebstemperatur / Operating temperature:                                                                                                                                                                                                                          |                                                                                                    |                                                                                                                |    |       | -20 °C ~ +45 °C               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       | Gewicht / Weight:                                                                                                                                                                                                                                                    |                                                                                                    |                                                                                                                |    |       | 20 g                          |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    | H          |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    | I          |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    | J          |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| <table><tr><td colspan="3">Änderungen</td><td>Datum</td><td>Name</td><td colspan="3">Bezeichnung</td><td colspan="3">göobay®<br/>by Wentronic GmbH<br/>Pillmannstraße 12<br/>38112 Braunschweig<br/>Germany</td><td colspan="3">Blatt</td></tr><tr><td colspan="2">Datum</td><td>Name</td><td>gez.:</td><td>22.03.2023</td><td>aw</td><td colspan="3">LED Reflektor MR11 GU4 warm-weiß<br/>2W 180lm 36°</td><td colspan="3">2/3</td></tr><tr><td colspan="2"></td><td></td><td>gepr.:</td><td>22.03.2023</td><td>aw</td><td colspan="3">Zeichnungs-Nr.:</td><td colspan="3">von</td></tr><tr><td colspan="2"></td><td></td><td>Norm:</td><td colspan="2"></td><td colspan="3">45608</td><td colspan="3"></td></tr><tr><td colspan="5"></td><td colspan="5">Änderungen vorbehalten / Subject to change</td><td colspan="5"></td></tr></table> |                                                                                                                                                                                                                                                                                                                                |      |        |            |                                            |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    | Änderungen |   |  | Datum | Name | Bezeichnung |  |  | göobay®<br>by Wentronic GmbH<br>Pillmannstraße 12<br>38112 Braunschweig<br>Germany |  |  | Blatt |  |  | Datum |  | Name | gez.: | 22.03.2023 | aw | LED Reflektor MR11 GU4 warm-weiß<br>2W 180lm 36° |  |  | 2/3 |  |  |  |  |  | gepr.: | 22.03.2023 | aw | Zeichnungs-Nr.: |  |  | von |  |  |  |  |  | Norm: |  |  | 45608 |  |  |  |  |  |  |  |  |  |  | Änderungen vorbehalten / Subject to change |  |  |  |  |  |  |  |  |  |
| Änderungen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                |      | Datum  | Name       | Bezeichnung                                |                                                                       |                                                                                                                                                                                                                                                                      | göobay®<br>by Wentronic GmbH<br>Pillmannstraße 12<br>38112 Braunschweig<br>Germany                 |                                                                                                                |    | Blatt |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
| Datum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                | Name | gez.:  | 22.03.2023 | aw                                         | LED Reflektor MR11 GU4 warm-weiß<br>2W 180lm 36°                      |                                                                                                                                                                                                                                                                      |                                                                                                    | 2/3                                                                                                            |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      | gepr.: | 22.03.2023 | aw                                         | Zeichnungs-Nr.:                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    | von                                                                                                            |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      | Norm:  |            |                                            | 45608                                                                 |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                |      |        |            | Änderungen vorbehalten / Subject to change |                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                    |                                                                                                                |    |       |                               |    |    |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1                                                                                                                                                                                                                                                                                                                              | 2    | 3      | 4          | 5                                          | 6                                                                     | 7                                                                                                                                                                                                                                                                    | 8                                                                                                  | 9                                                                                                              | 10 | 11    | 12                            | 13 | 14 |            |   |  |       |      |             |  |  |                                                                                    |  |  |       |  |  |       |  |      |       |            |    |                                                  |  |  |     |  |  |  |  |  |        |            |    |                 |  |  |     |  |  |  |  |  |       |  |  |       |  |  |  |  |  |  |  |  |  |  |                                            |  |  |  |  |  |  |  |  |  |

Relatives Spektrum / Relative spectrum



Änderungen

| Datum                                      | Name | gez.:  | Datum      | Name |
|--------------------------------------------|------|--------|------------|------|
|                                            |      | gepr.: | 22.03.2023 | aw   |
|                                            |      | Norm:  |            |      |
| Änderungen vorbehalten / Subject to change |      |        |            |      |

Bezeichnung

LED Reflektor MR11 GU4 warm-weiß  
2W 180lm 36°

Zeichnungs-Nr.:

45608

**goobay®**  
by Wentronic GmbH  
Pillmannstraße 12  
38112 Braunschweig  
Germany

Blatt

**3/3**

von