# WINGER® WEPRBDR3-S1
# Power LED Star, royal blue + deep red
# 410–800 nm, typ. 35 lm, 120°

| | |
|---|---|
| **Item number** | 7302200101 |
| **Type** | WEPRBDR3-S1 |
| **Brand** | WINGER® |
| **Package** | Power LED on star MCPCB, 20 × 20 mm |
| **Emitted colour** | royal blue + deep red, typ. 410 nm |
| **Viewing angle** | 120° |



The WINGER® WEPRBDR3-S1 is a 3 W power LED on a star metal-core PCB (20 × 20 mm). It emits royal blue + deep red light (typ. 410 nm) at typ. 35 lm at 700 mA with a 120° viewing angle.

Operate from a 700 mA constant-current source. Ensure adequate cooling of the LED.

## 1 Optical and Electrical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|---|---|---|---|---|---|---|
| Forward voltage | $V_F$ | 3.2 | 3.4 | 3.8 | V | $I_F$ = 700 mA |
| Viewing angle (50 % power angle) | 2θ½ | | 120 | | ° | $I_F$ = 700 mA |
| Luminous flux | $\Phi_V$ | | 35 | | lm | $I_F$ = 700 mA |
| Dominant wavelength | $\lambda_D$ | | 410 | | nm | $I_F$ = 700 mA |
| Recommended forward current | $I_{F(rec)}$ | | 700 | | mA | |
| Reverse current | $I_R$ | | | 20 | µA | $V_R$ = 5 V |

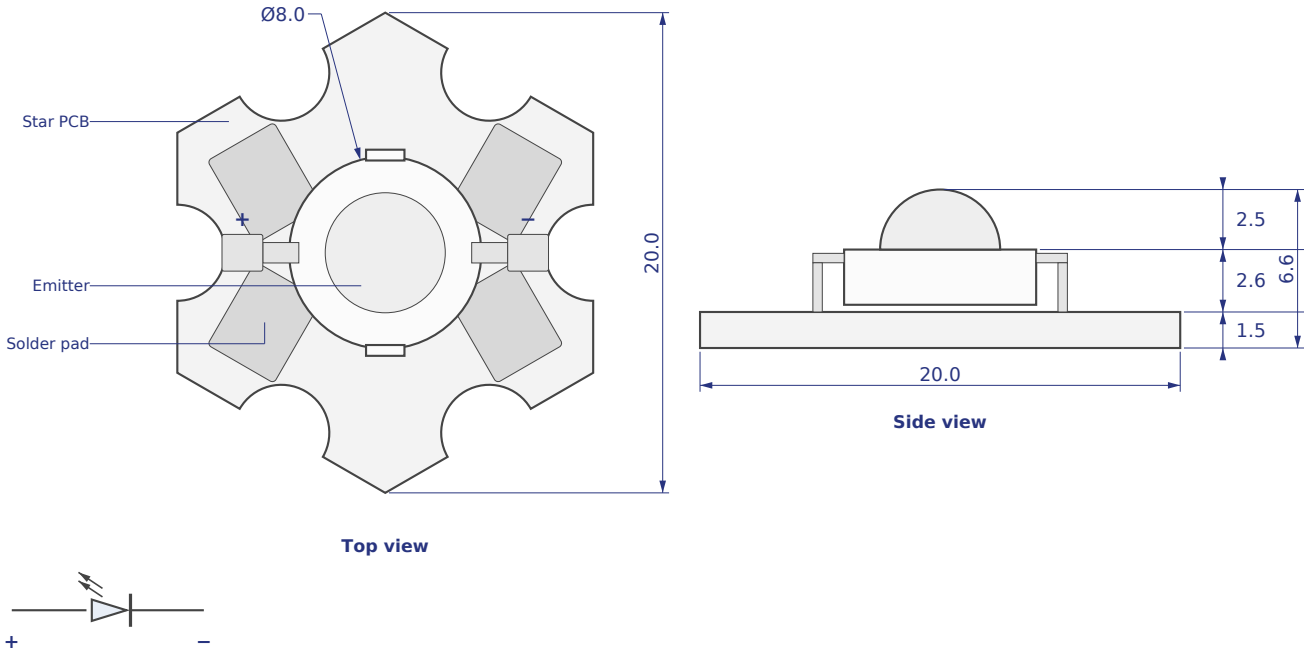
Measurement conditions: $T_A$ = 25 °C unless otherwise stated.

## 2 Absolute Maximum Ratings

| Parameter | Symbol | Rating |
|---|---|---|
| Forward current | $I_F$ | 700 mA |
| Peak forward current (duty cycle 1/10, pulse width 0.1 ms) | $I_{FP}$ | 1400 mA |
| Reverse voltage | $V_R$ | 5 V |
| Max. power dissipation | $P_D$ | 3 W |
| Operating temperature range | $T_{OPR}$ | −20 … +60 °C |
| Storage temperature range | $T_{STG}$ | −30 … +60 °C |
| Soldering temperature | $T_{SOL}$ | max. 5 s at 260 °C |

## 3 Mechanical Data

| Parameter | Value |
|---|---|
| Package | Power LED on star MCPCB |
| Tip-to-tip | 20.0 mm |
| Overall height | 6.6 mm |
| Emitter diameter | 8.0 mm |
| PCB thickness | 1.5 mm |
| Polarity | anode left (+), cathode right (−) |




Dimensions in mm. General tolerance ±0.25 mm. Anode (+), cathode (−).

## 4 Ordering Information and Packaging

| Parameter | Value |
|---|---|
| Item number | 7302200101 |
| Type | WEPRBDR3-S1 |
| Packaging | loose in bag |
| Packaging unit | 20 pcs |

## 5 Handling and Application Notes

- Always operate the LED from a 700 mA constant-current source – never connect it directly to a voltage source.
- When connecting LEDs in parallel, provide separate current limiting for each LED or string.
- Do not exceed the absolute maximum ratings, not even briefly; avoid reverse voltage. Ensure adequate cooling of the LED.
- Observe ESD precautions. Do not apply mechanical stress to the emitter or the lens while the LED is hot (during and directly after soldering). Let it cool down to room temperature first.
- Clean with isopropyl alcohol only if necessary; do not use aggressive solvents.
- Do not look directly into the LED at short distance for a longer period (glare).

## 6 Environmental Compliance

| Parameter | Value |
|---|---|
| RoHS (EU) 2011/65/EU incl. (EU) 2015/863 | compliant [4] |
| REACH (EC) 1907/2006 | no SVHC of the candidate list above 0.1 % (w/w) known |

Declarations of conformity are available on request.

[4] Typical value for this LED type; not individually measured / subject to confirmation.

## 7 Warranty and Application Limits

- Perform an acceptance inspection on arrival of the goods; return defective items stating the defect and quantity.
- Integration of the LEDs into the application and verification of service life and other qualities in practical use shall be carried out by the user.
- Do not use the LEDs in applications requiring higher reliability and safety where failure or malfunction could endanger life or health. The seller assumes no liability for claims or damages resulting from use contrary to the intended purpose or without written consent.
- The seller assumes no responsibility for damage or defects caused by operation at currents exceeding the absolute maximum ratings; these are not covered by warranty.

Values marked [4] are typical values for this LED type and have not been individually measured for this item; they are subject to confirmation. Please contact us for binding values: info@led1.de · +49 340 8508260.

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