

# EPIGAP Optronik GmbH

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## Data Sheet

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### High Power LED

### EOLS-505-227

Rev. 04, 2018

| Radiation  | Type  | Case                      |
|------------|-------|---------------------------|
| Blue-green | InGaN | SMD 6046 (2418), ceramics |

|  |  |
|--|--|
|  |  |
| <b>Description:</b>  |  |
| <ul style="list-style-type: none"> <li>- size: 6.0(L) x 4.6(W) x 4.3(H) mm</li> <li>- high pulse current up to 1000 mA</li> <li>- with lens, view angle 20°</li> <li>- soldering pads: gold plated; only for reflow soldering</li> <li>- marking at anode</li> </ul> |  |

### Maximum Ratings

$T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified

| Parameter                   | Test conditions                            | Symbol       | Value      | Unit               |
|-----------------------------|--|--------------|------------|--------------------|
| Forward current             |  | $I_F$        | 700        | mA                 |
| Peak forward current        | $t_p \leq 100 \mu\text{s}$ , $\tau = 1:10$ | $I_{FM}$     | 1000       | mA                 |
| Reverse voltage             |  | $V_R$        | 5          | V                  |
| Thermal resistance          |  | $R_{th\_JA}$ | 5          | K/W                |
| Operating temperature range |  | $T_{amb}$    | -40 to +85 | $^{\circ}\text{C}$ |
| Storage temperature range   |  | $T_{stg}$    | -40 to +85 | $^{\circ}\text{C}$ |

Electrostatic discharge classification (MIL-STD-883) - class 1

### Optical and Electrical Characteristics

$T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified

| Parameter          | Symbol                | Conditions             | Min | typ  | max | Unit          |
|--------------------|-----------------------|------------------------|-----|------|-----|---------------|
| Forward voltage    | $V_F$                 | $I_F = 350 \text{ mA}$ |     | 3.45 | 3.7 | V             |
| Radiant power*     | $\Phi_e$              | $I_F = 350 \text{ mA}$ |     | 170  |     | mW            |
| Radiant intensity* | $I_e$                 | $I_F = 350 \text{ mA}$ |     | 610  |     | mW/sr         |
| Peak wavelength    | $\lambda_p$           | $I_F = 350 \text{ mA}$ | 497 | 505  | 513 | nm            |
| FWHM               | $\Delta\lambda_{0,5}$ | $I_F = 350 \text{ mA}$ |     | 32   |     | nm            |
| Reverse current    | $I_R$                 | $I_R = 5 \text{ V}$    |     |      | 100 | $\mu\text{A}$ |

\*measured on star board



We reserve the right to make changes to improve technical design and may do so without further notice. Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.

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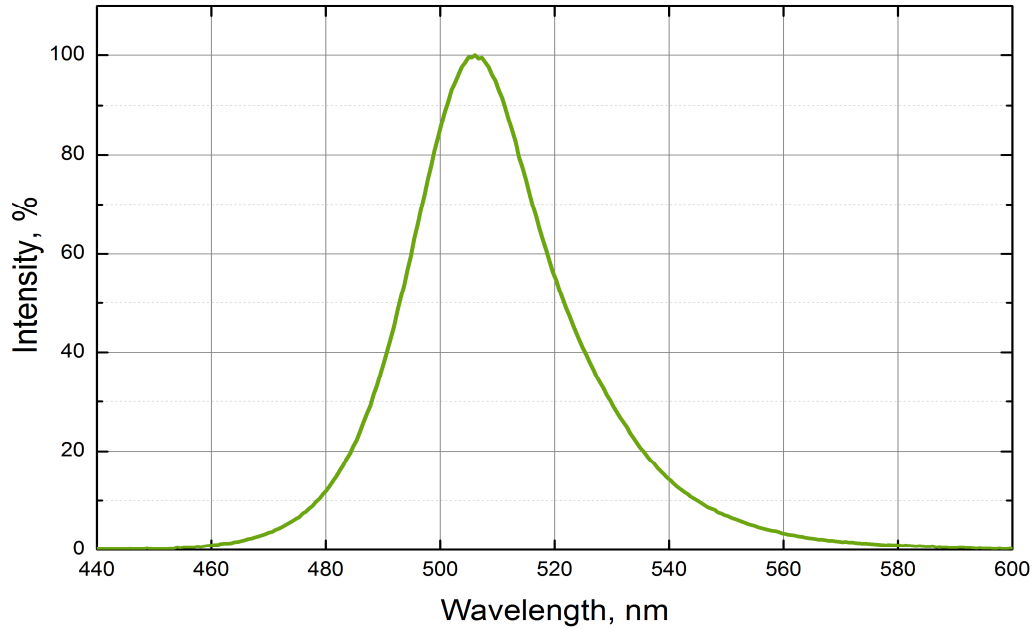


## Data Sheet

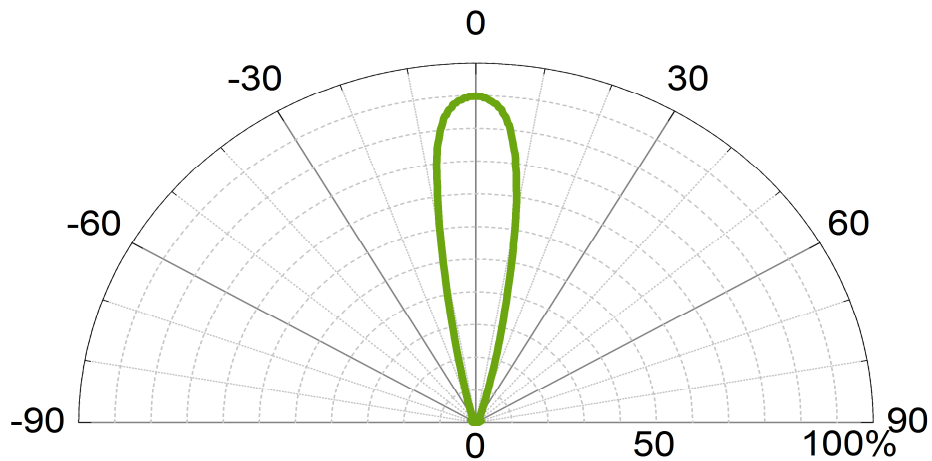
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Typical radiation spectrum at 350 mA



Radiation pattern

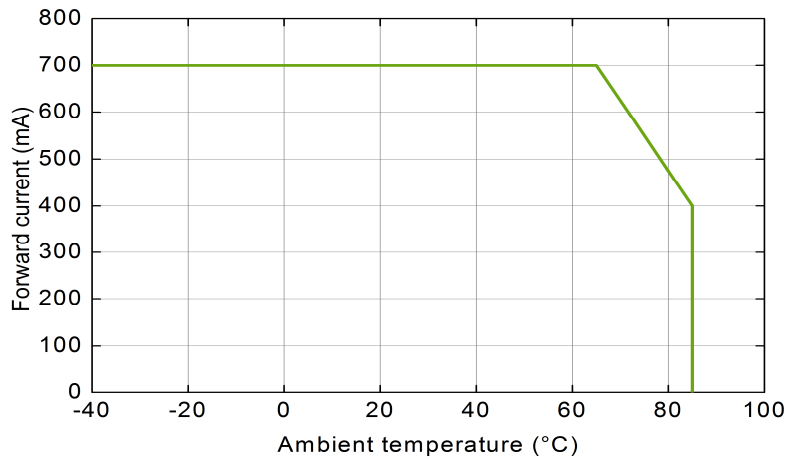


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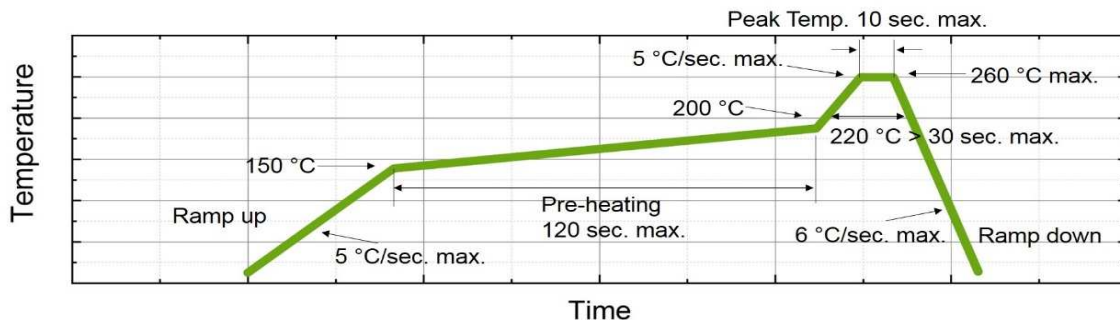
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**High Power LED**

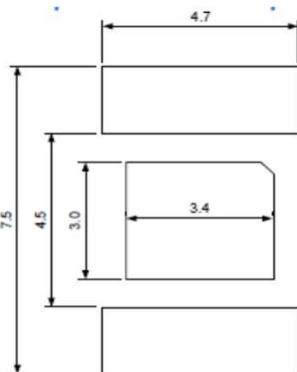
**EOLS-505-227**



**Max. forward current vs. ambient temperature**



**Recommended reflow soldering profile**



**Recommended soldering pad**

Thermal pad needs to be connected to a heat sink with less than 10 K/W thermal resistance.

Art. No. 133 161

