

| Radiation | Type | Technology | Case |
|-----------|------|---------------|------------------------|
| Infrared | DDH | AlGaAs/AlGaAs | 5 mm flat plastic case |

| | |
|--|--|
| | Description High-power, high-speed infrared LED, wide beam angle, housing with standoff leads |
| | Note: Special packages without standoff available on request Applications Optical communications, safety equipment, automation |

Maximum Ratings

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

| Parameter | Test conditions | Symbol | Value | Unit |
|-----------------------------|--|-----------|-------------|--------------------|
| Forward current (DC) | | I_F | 100 | mA |
| Peak forward current | $(t_p \leq 50 \mu\text{s}, t_p/T = 1/2)$ | I_{FM} | 1000 | mA |
| Power dissipation | | P_D | 180 | mW |
| Operating temperature range | | T_{amb} | -20 to +80 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | -40 to +100 | $^{\circ}\text{C}$ |
| Junction temperature | | T_J | 100 | $^{\circ}\text{C}$ |

Optical and Electrical Characteristics

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

| Parameter | Test conditions | Symbol | Min | Typ | Max | Unit |
|---------------------------|------------------------|-----------------------|-----|-----|-----|-------|
| Forward voltage | $I_F = 20 \text{ mA}$ | V_F | | 1.2 | 1.4 | V |
| Forward voltage | $I_F = 100 \text{ mA}$ | V_F | | 1.4 | | V |
| Reverse voltage | $I_R = 10 \mu\text{A}$ | V_R | 5 | | | V |
| Radiant power | $I_F = 20 \text{ mA}$ | Φ_e | 5 | 7 | | mW |
| Radiant power | $I_F = 100 \text{ mA}$ | Φ_e | | 30 | | mW |
| Radiant intensity | $I_F = 20 \text{ mA}$ | I_e | 0.5 | 0.8 | | mW/sr |
| Radiant intensity | $I_F = 100 \text{ mA}$ | I_e | | 3.8 | | mW/sr |
| Peak wavelength | $I_F = 100 \text{ mA}$ | λ_p | 870 | 880 | 890 | nm |
| Spectral bandwidth at 50% | $I_F = 100 \text{ mA}$ | $\Delta\lambda_{0.5}$ | | 65 | | nm |
| Viewing angle | $I_F = 100 \text{ mA}$ | φ | | 110 | | deg. |
| Switching time | $I_F = 100 \text{ mA}$ | t_r, t_f | | 10 | | ns |

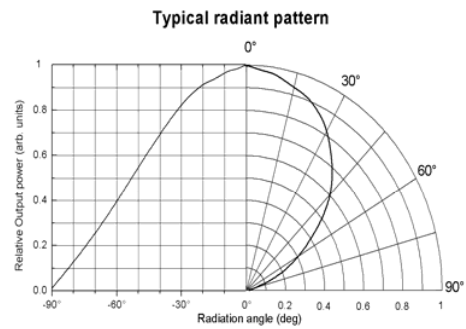
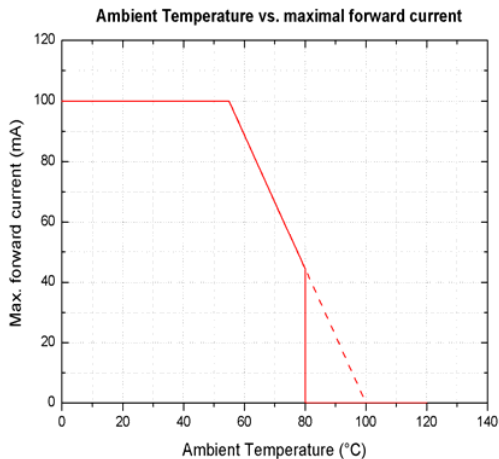
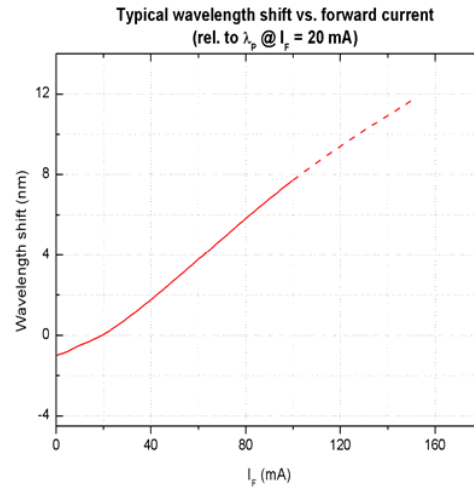
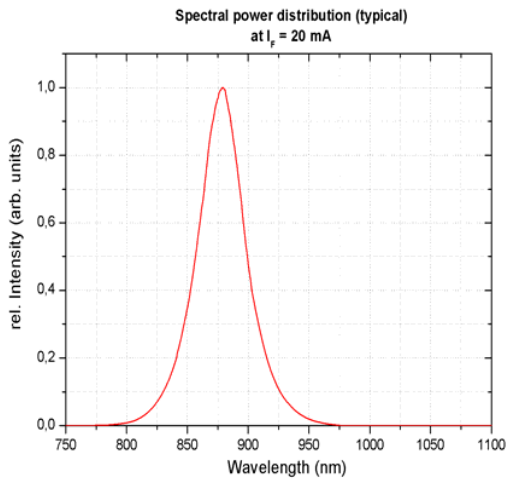
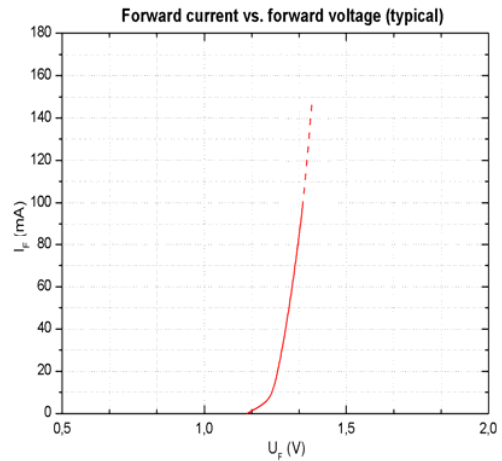
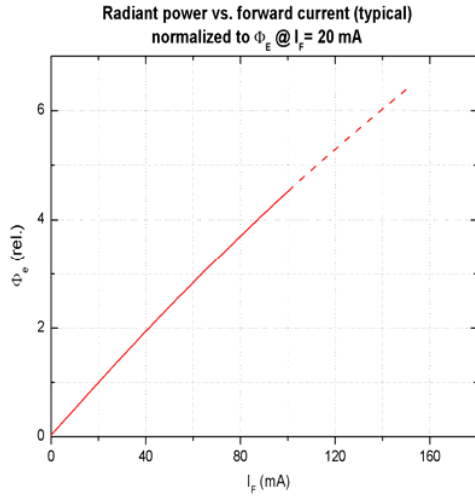
Note: All measurements carried out on *EPIGAP* equipment

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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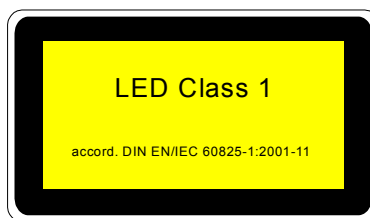


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Remarks concerning optical radiation safety*

Up to maximum forward current, at continuous operation, this LED may be classified as LED product *Class 1*, according to standard IEC 60825-1:A2. *Class 1* products are safe to eyes and skin under reasonably predictable conditions. This implicates a direct observation of the light beam by means of optical instruments.

*Note: Safety classification of an optical component mainly depends on the intended application and the way the component is being used. Furthermore, all statements made to classification are based on calculations and are only valid for this LED "as it is", and at continuous operation. Using pulsed current or altering the light beam with additional optics may lead to different safety classifications. Therefore these remarks should be taken as recommendation and guideline only.



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