

Radiation	Type	Technology	Case
Red	DDH	AlGaAs/AlGaAs	5 mm plastic lens

	Description High-power, high-speed deep red LED in standard 5 mm package, housing without standoff leads
	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	30	mA
Peak forward current	$(t_p \leq 50 \mu\text{s}, t_p/T = 1/2)$	I_{FM}	100	mA
Operating temperature range		T_{amb}	-20 to +85	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-55 to +100	$^{\circ}\text{C}$
Junction temperature		T_J	100	$^{\circ}\text{C}$
Soldering temperature	$t \leq 5 \text{ s}, 3 \text{ mm from case}$	T_{sd}	260	$^{\circ}\text{C}$

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		2.0	2.3	V
Reverse voltage	$I_R = 10 \mu\text{A}$	V_R	5			V
Radiant power	$I_F = 20 \text{ mA}$	Φ_e	3	4		mW
Luminous intensity	$I_F = 20 \text{ mA}$	I_v	700	1000		mcd
Radiant intensity	$I_F = 20 \text{ mA}$	I_e	15	20		mW/sr
Peak wavelength	$I_F = 20 \text{ mA}$	λ_p	650	655	660	nm
Dominant wavelength	$I_F = 20 \text{ mA}$	λ_d		640		nm
Spectral bandwidth at 50%	$I_F = 20 \text{ mA}$	$\Delta\lambda_{0.5}$		22		nm
Viewing angle	$I_F = 20 \text{ mA}$	φ		20		deg.
Switching time	$I_F = 20 \text{ mA}$	t_r, t_f		70		ns

*measured after 30s current flow

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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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.