



LED - Lamp

ELD-680-524

Preliminary

10.04.2007

rev. 08/07

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

	<p>Description</p> <p>High-power, high-speed deep red LED in standard 5 mm package, with lens for optimal beam forming, housing without standoff leads</p> <p>Note: Special packages with standoff available on request</p> <p>Applications</p> <p>Optical communications, safety equipment, automation</p>
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Maximum Ratings

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

Parameter	Test conditions	Symbol	Value	Unit
Forward current (DC)		I_F	50	mA
Peak forward current	$(t_p \leq 50 \mu\text{s}, t_p/T = 1/2)$	I_{FM}	100	mA
Power dissipation		P_D	150	mW
Operating temperature range		T_{amb}	-20 to +80	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-30 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		1.8	2.2	V
Reverse voltage	$I_R = 10 \mu\text{A}$	V_R	5			V
Radiant power	$I_F = 20 \text{ mA}$	Φ_e	2,3	3,0		mW
Radiant power*	$I_F = 50 \text{ mA}$	Φ_e		7,2		mW
Peak wavelength	$I_F = 20 \text{ mA}$	λ_p	675	685	695	nm
Spectral bandwidth at 50%	$I_F = 20 \text{ mA}$	$\Delta\lambda_{0.5}$		45		nm
Viewing angle	$I_F = 20 \text{ mA}$	φ		20		deg.
Switching time	$I_F = 20 \text{ mA}$	t_r, t_f		40		ns

*measured after 30s current flow