

Radiation	Type	Technology	Case
Infrared	DDH	AlGaAs/AlGaAs	TO-46

	<p>Description</p> <p>High-power, high-speed infrared LED in hermetically sealed TO-46 package, mounted on reflector header for beam forming</p> <p>Note: Special packages with standoff available on request</p> <p>Applications</p> <p>Optical communications, safety equipment, automation, optical sensors, encoders</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	100	mA
Peak forward current	$(t_p \leq 50 \mu\text{s}, t_p/T = 1/2)$	I_{FM}	200	mA
Power dissipation		P_D	220	mW
Operating temperature range		T_{amb}	-40 to +100	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-55 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		1.6	1.9	V
Forward voltage*	$I_F = 100 \text{ mA}$	V_F		1.7	2.1	V
Reverse voltage	$I_R = 10 \mu\text{A}$	V_F	5			V
Radiant power	$I_F = 20 \text{ mA}$	Φ_e	1.8	2.2		mW
Radiant power*	$I_F = 100 \text{ mA}$	Φ_e		10		mW
Radiant intensity*	$I_F = 100 \text{ mA}$	I_e		8		mW/sr
Peak wavelength	$I_F = 100 \text{ mA}$	λ_p	800	810	820	nm
Spectral bandwidth at 50%	$I_F = 100 \text{ mA}$	$\Delta\lambda_{0.5}$		35		nm
Viewing angle	$I_F = 100 \text{ mA}$	φ		90		deg.
Switching time	$I_F = 100 \text{ mA}$	t_r, t_f		40		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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