



## ELS-810-638

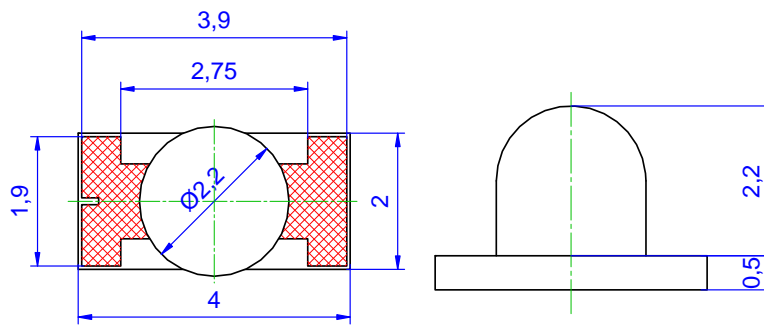
Radiation	Type	Technology	Case
Infrared	SMD - LED on silicon carrier	AlGaAs/AlGaAs	waterclear, plastic lens

### Description

High-power, double-hetero AlGaAs structure with removed substrate on heatsink for „up side down“ mounting

### Applications

Photoelectric barriers, remote controls, illumination for CCD-cameras and night-vision systems, alarm guard systems, fibre optics



all dimensions in mm, tolerance:  $\pm 0,05$  mm

### Maximum Ratings

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

Parameter	Test conditions	Symbol	Value	Unit
DC forward current	on heatsink	$I_F$	250	mA
Peak forward current	$t_p \leq 10 \mu\text{s}$ , $f \leq 500$ Hz	$I_{FRM}$	2000	mA
Reverse voltage	$I_R = 10 \mu\text{A}$	$V_R$	5	V
Operating temperature range		$T_{amb}$	-25 to +85	$^{\circ}\text{C}$
Junction temperature		$T_{jmax}$	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	$I_F = 100$ mA	$V_F$		1.75		V
Forward voltage	$I_F = 250$ mA	$V_F$		2.2		V
Radiant power	$I_F = 100$ mA	$\Phi_e$		17		mW
Peak wavelength	$I_F = 100$ mA	$\lambda_p$	790	810	830	nm
Spectral bandwidth at 50%	$I_F = 100$ mA	$\Delta\lambda_{0,5}$		30		nm
Viewing angle	$I_F = 100$ mA	$\varphi$		30	35	deg
Switching time	$I_F = 100$ mA	$t_r$ , $t_f$		30		ns
Temperature coefficient of forward voltage	$I_F = 100$ mA	$TKV_F$		-2		mV/K
Thermal resistance junction/heatsink	$I_F = 100$ mA	$R_{th}$		50		K/W