

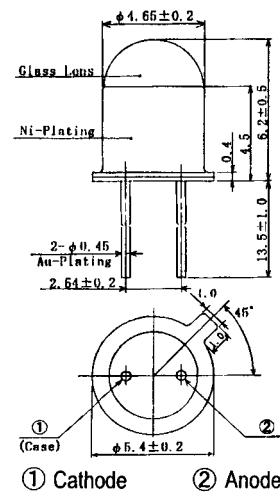
Color	Type	Technology	Case
Red	Lens cap	AlGaAs	TO-18

Description

High output power
Narrow beam angle
High reliability

Applications

Color sensor (money bill)
Paper sensor (money-bill)
Bar-code reader



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	$(t_p \leq 10 \mu\text{s}, T = 10 \text{ms})$	I_{FM}	500	mA
Reverse current	$V_R = 5 \text{V}$	I_R	10	μA
Power dissipation		P_D	110	mW
Operating temperature range		T_{amb}	-20 to +85	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-30 to +100	$^{\circ}\text{C}$
Junction temperature		T_j	100	$^{\circ}\text{C}$
Lead soldering temperature	5 sec max, 3 mm from the body	T_{sol}	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
Radiant power	$I_F = 20 \text{mA}$	Φ_e	1.5	3.0		mW
Reverse current	$U_R = 5 \text{V}$	I_R			100	μA
Peak wavelength	$I_F = 20 \text{mA}$	λ_p		660		nm
Spectral bandwidth at 50%	$I_F = 20 \text{mA}$	$\Delta\lambda_{0.5}$		25		nm
Viewing angle	$I_F = 20 \text{mA}$	φ		12		deg.
Rise time and fall time	$I_F = 20 \text{mA}$	t_r, t_f		30		ns
Junction capacitance	$f=1 \text{MHz}, V=0 \text{V}$	C_j		20		pF
Temperature coefficient of Φ_e	$I_F = 10 \text{mA}$	$\text{TC}\Phi_e$		-0.5		%/K
Temperature coefficient of V_F	$I_F = 10 \text{mA}$	$\text{TC}V_F$		-1.5		mV/K