



EPD-660-1-0.9

Wavelength	Type	Technology	Case
Red	SMD	AlGaAs/GaAs	SMD 1206

	Description Narrow bandwidth and high spectral sensitivity in the red visible range (610...700 nm), compact design in standard SMD package allows for easy circuit board mounting and assembling of arrays
	Applications Light barriers, optical communications, safety equipment, alarm systems

Miscellaneous Parameters

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

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	0,62	mm ²
Operating temperature range		T_{amb}	-20 to +85	°C
Storage temperature range		T_{stg}	-40 to +125	°C

Optical and Electrical Characteristics

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

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage ¹⁾	$I_R = 10 \mu\text{A}$	V_R		10		V
Dark current ($E_e = 0 \text{ W/m}^2$)	$V_R = 1 \text{ V}$	I_D		40	300	pA
Responsivity at λ_p	$V_R = 0 \text{ V}$	S_λ		0.42		A/W
Peak sensitivity	$V_R = 0 \text{ V}$	λ_p		660		nm
Sensitivity range at 50%	$V_R = 0 \text{ V}$	$\lambda_{min}, \lambda_{max}$	620		700	nm
Spectral bandwidth at 50%	$V_R = 0 \text{ V}$	$\Delta\lambda_{0.5}$		80		nm
Shunt resistance	$V_R = 10 \text{ mV}$	R_{SH}	200	400		GΩ
Noise equivalent power	$\lambda = 660 \text{ nm}$	NEP		8.5×10^{-15}		$\text{W}/\sqrt{\text{Hz}}$
Specific detectivity	$\lambda = 660 \text{ nm}$	D^*		9.2×10^{12}		$\text{cm} \cdot \sqrt{\text{Hz}} \cdot \text{W}^{-1}$
Junction capacitance	$V_R = 0 \text{ V}$	C_J		40		pF
Switching time ($R_L = 50 \Omega$)	$V_R = 1 \text{ V}$	t_r, t_f		40		ns
Photocurrent at illuminant A ^{1,2)}	$V_R = 0 \text{ V}$ $E_v = 1000 \text{ lx}$	I_{ph}		470		nA

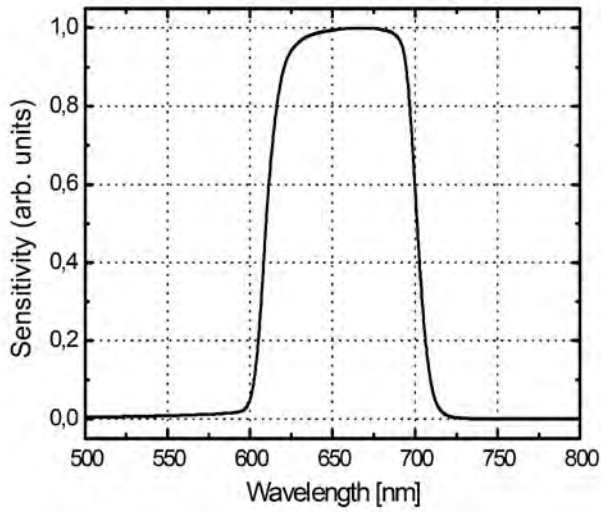
¹⁾for information only

²⁾Standard light source with a color temperature of 2856 K

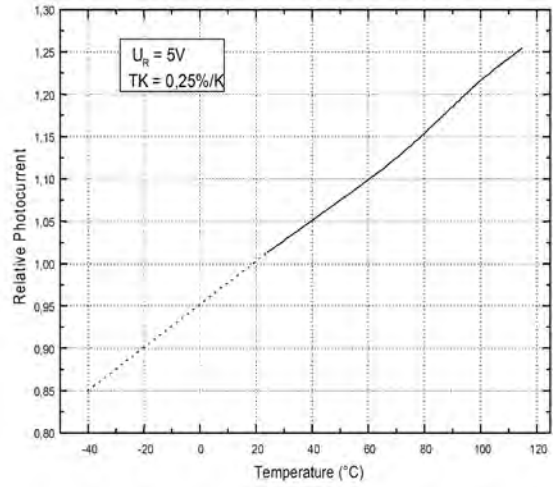
Note: The above specifications are for reference purpose only and subjected to change without prior notice.



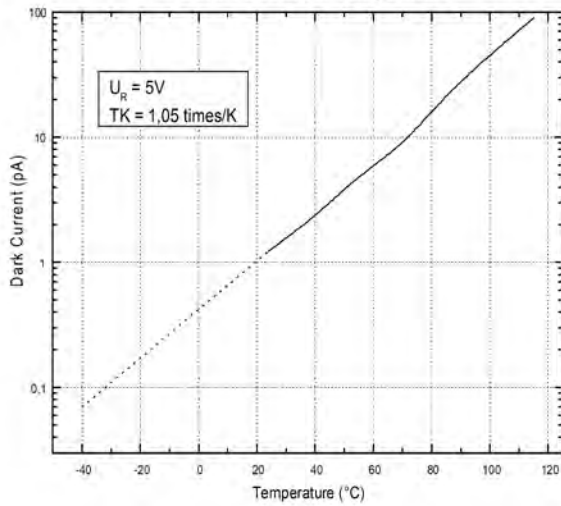
Optical sensitivity (typically)



Relative Photocurrent vs. Temperature



Dark Current vs. Temperature



Short-circuit current vs. illuminance (typical) ²⁾

