



Photodiode

EPD-660-5/0.5

Preliminary

26.06.2007

rev. 04/07

Wavelength	Type	Technology	Case
Red	water clear	AlGaAs/GaAs	5 mm plastic lens

	<p>Description</p> <p>Selective photodiode mounted in standard 5 mm package without standoff. Narrow response range (660 nm peak) by means of integrated filter</p> <p>Note: Special packages with standoff available on request</p> <p>Applications</p> <p>Optical communications, safety equipment, automation, analytics</p>
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Miscellaneous Parameters

T_{amb} = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	0.17	mm ²
Temperature coefficient of I _D		T _C (I _D)	4	%/K
Operating temperature range		T _{amb}	-20 to +85	°C
Storage temperature range		T _{stg}	-40 to +100	°C
Soldering Temperature	t ≤ 3 s, 3 mm from case	T _{slid}	260	°C
Acceptance angle at 50% S _λ		φ	20	deg.

Optical and Electrical Characteristics

T_{amb} = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage ¹⁾	I _R = 10 μA	V _R	5			V
Dark current	V _R = 1 V	I _D		40	200	pA
Peak sensitivity wavelength	V _R = 0 V	λ _p		660		nm
Responsivity at λ _p	V _R = 0 V	S _λ		0.42		A/W
Sensitivity range at 1% ¹⁾	V _R = 0 V	λ _{min} , λ _{max}	605		705	nm
Spectral bandwidth at 50%	V _R = 0 V	Δλ _{0.5}		80		nm
Shunt resistance	V _R = 10 mV	R _{SH}	500	670		GΩ
Noise equivalent power	λ = 660 nm	NEP		8.5x10 ⁻¹⁵		W/√Hz
Specific detectivity	λ = 660 nm	D*		4.8x10 ¹²		cm·√Hz·W ⁻¹
Junction capacitance	V _R = 0 V	C _J		50		pF
Switching time (R _L = 50 Ω)	V _R = 1 V	t _r , t _f		15/30		ns
Photo-current at illuminant A ^{1,2)}	V _R = 0 V E _v = 1000 lx	I _{Ph}		0.75		μA

¹⁾for information only

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



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