

Photodiode

EPD-525-0-1.4

22.04.2008

rev. 01

Wavelength	Type	Technology	Case
Green, selective	Integrated filter	GaP	TO-18

	<p>Description</p> <p>Narrow bandwidth and high spectral sensitivity in the green visible range (500...600 nm), mounted in hermetically sealed TO-18 package.</p>
	<p>Applications</p> <p>Alarm systems, light barriers, special sensors for automotive industry, for nearly V_λ matched detectors</p>

Miscellaneous Parameters

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

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	1.79	mm ²
Temperature coefficient of I_D	$T = -40 \dots 120^\circ\text{C}$	TC_{I_D}	4.7	%/K
Operating temperature range		T_{amb}	-40 to +125	°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
Dark current	$V_R = 5 \text{ V}$	I_D		5	30	pA
Peak sensitivity wavelength	$V_R = 0 \text{ V}$	λ_p		525		nm
Responsivity at λ_p	$V_R = 0 \text{ V}$	S_λ		0.08		A/W
Sensitivity range at 1% ¹⁾	$V_R = 0 \text{ V}$	$\lambda_{min}, \lambda_{max}$	410		580	nm
Spectral bandwidth at 50%	$V_R = 0 \text{ V}$	$\Delta\lambda_{0.5}$		75		nm
Shunt resistance	$V_R = 10 \text{ mV}$	R_{SH}		200		GΩ
Noise equivalent power	$\lambda = 525 \text{ nm}$	NEP		10.6×10^{-14}		$\text{W}/\sqrt{\text{Hz}}$
Specific detectivity	$\lambda = 525 \text{ nm}$	D^*		1.26×10^{13}		$\text{cm} \cdot \sqrt{\text{Hz}} \cdot \text{W}^{-1}$
Junction capacitance	$V_R = 0 \text{ V}$	C_J		180		pF
Switching time ($R_L = 50 \Omega$)	$V_R = 1 \text{ V}$	t_r, t_f		35		ns

¹⁾for information only

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

Labeling

Type	Lot N°	Typ. S_λ [A/W]	Quantity
EPD-525-0-1.4			

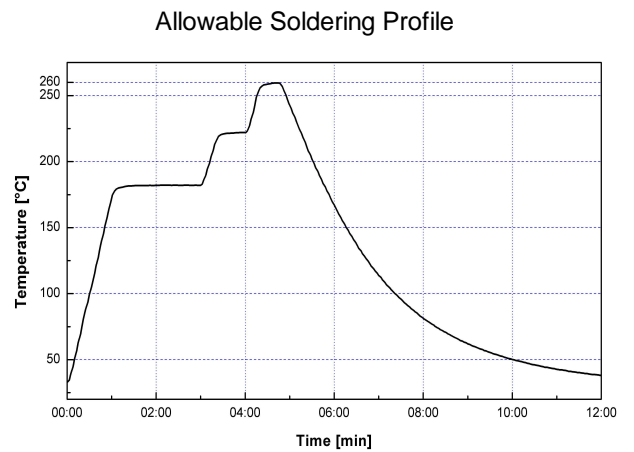
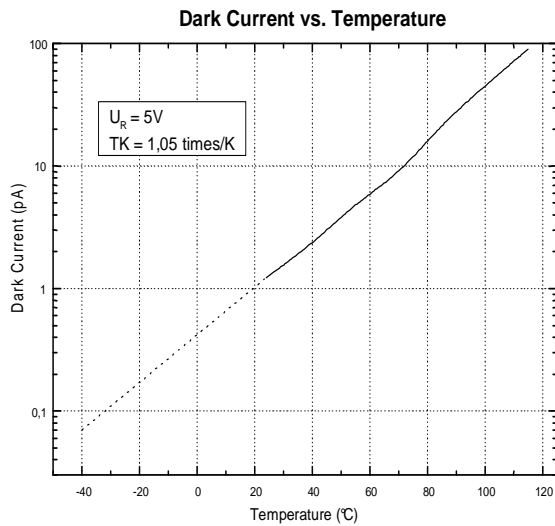
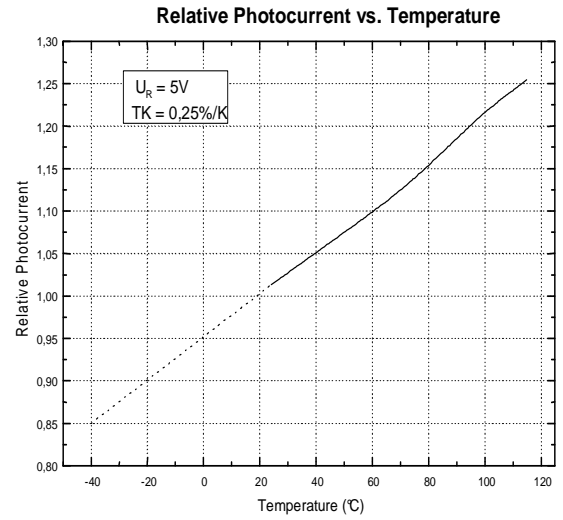
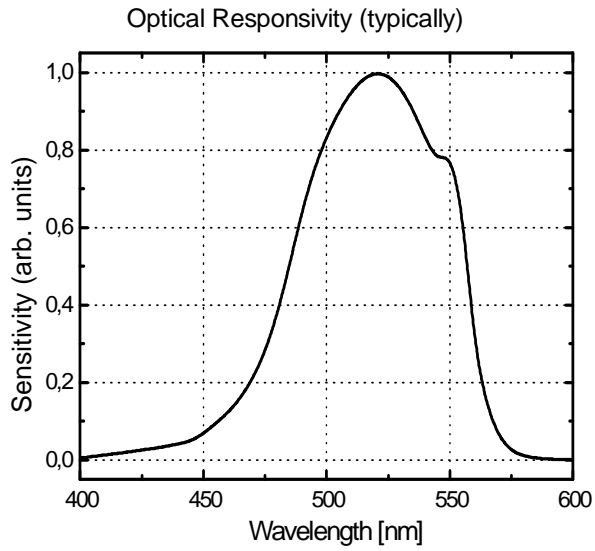
*Note: All measurements carried out with *EPIGAP* equipment

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 application by the customers themselves.

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