

Wavelength	Type	Technology	Case
Infrared	Integrated filter	AlGaAs/GaAs	3 mm plastic lens

	<p><b>Description</b>                  Selective photodiode mounted in standard 3 mm package without standoff. Narrow bandwidth and high spectral sensitivity in the infrared range (810...950 nm).</p> <p>Note: Special packages with standoff available on request</p> <p><b>Applications</b>                  Alarm systems, light barriers, special sensors, analytics, optical communication</p>
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**Miscellaneous Parameters**

T<sub>amb</sub> = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	0.62	mm <sup>2</sup>
Temperature coefficient of I <sub>D</sub>		T <sub>C</sub> (I <sub>D</sub> )	5	%/K
Operating temperature range		T <sub>amb</sub>	-20 to +85	°C
Storage temperature range		T <sub>stg</sub>	-30 to +100	°C
Soldering Temperature	t ≤ 3 s, 3 mm from case	T <sub>slid</sub>	260	°C
Acceptance angle at 50% S <sub>λ</sub>		φ	60	deg.

**Optical and Electrical Characteristics**

T<sub>amb</sub> = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage <sup>1)</sup>	I <sub>R</sub> = 10 μA	V <sub>R</sub>	5			V
Dark current	V <sub>R</sub> = 1 V	I <sub>D</sub>		1.0	2.5	nA
Peak sensitivity wavelength	V <sub>R</sub> = 0 V	λ <sub>p</sub>		890		nm
Responsivity at λ <sub>p</sub>	V <sub>R</sub> = 0 V	S <sub>λ</sub>	0.3	0.55		A/W
Sensitivity range at 10% <sup>1)</sup>	V <sub>R</sub> = 0 V	λ <sub>min</sub> , λ <sub>max</sub>	800		960	nm
Spectral bandwidth at 50%	V <sub>R</sub> = 0 V	Δλ <sub>0.5</sub>		115		nm
Shunt resistance	V <sub>R</sub> = 10 mV	R <sub>SH</sub>		115		GΩ
Noise equivalent power	λ = 880 nm	NEP		3.3x10 <sup>-14</sup>		W/√Hz
Specific detectivity	λ = 880 nm	D*		2.4x10 <sup>12</sup>		cm · √Hz · W <sup>-1</sup>
Junction capacitance	V <sub>R</sub> = 0 V	C <sub>J</sub>		120		pF
Switching time (R <sub>L</sub> = 50 Ω)	V <sub>R</sub> = 1 V	t <sub>r</sub> , t <sub>f</sub>		200		ns
Photo-current at λ <sub>p</sub> = 875 nm	V <sub>R</sub> = 0 V E <sub>e</sub> = 1mW/cm <sup>2</sup>	I <sub>Ph</sub>		14		μA

<sup>1)</sup>for information only

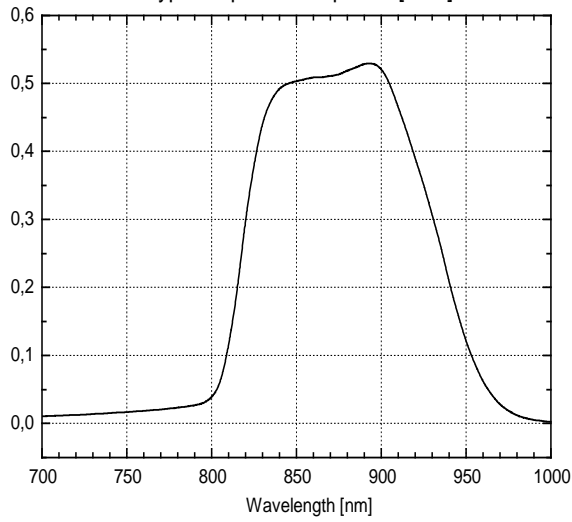
<sup>2)</sup> Halogen lamp source with appropriate filter

Note: All measurements carried out with *EPIGAP* equipment

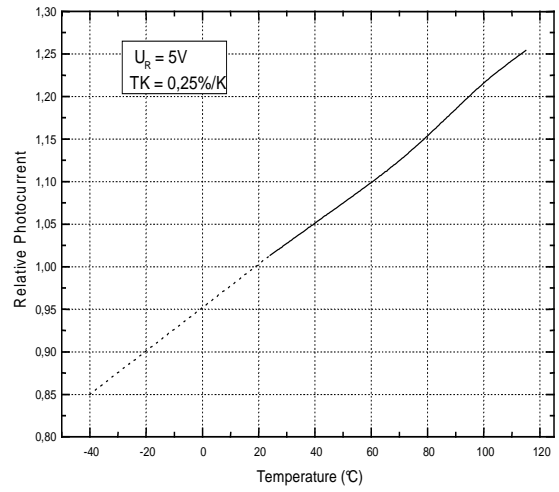
**Labeling**

Type	Lot N°	R <sub>D</sub> (typ.) [GΩ]	Quantity
EPD-880-3-0.9			

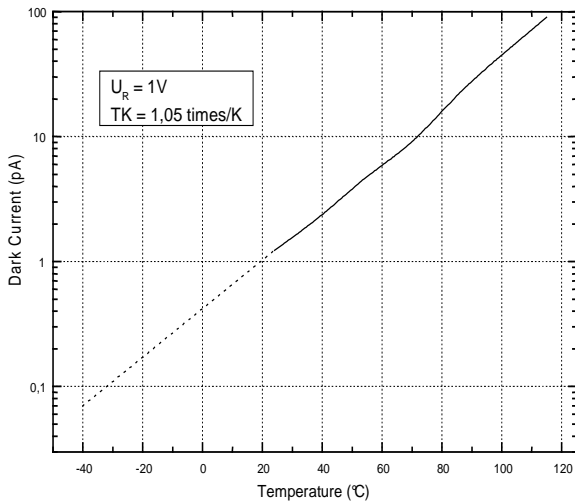
Typical spectral response [A/W]



Relative Photocurrent vs. Temperature



Dark Current vs. Temperature



Short-circuit current vs. irradiance (typical) <sup>2)</sup>

