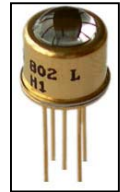




IQ80xL series



TECHNICAL DATA

Si Photodiode, with integrated TI amplifier

Features

- Si-photodiode with integrated low noise JFET TI amplifier
- integrated feedback resistor and capacitor
- decadic staggered responsivity
- spectral range VIS and NIR
- very low offset- and drift parameters
- high dynamic range
- dual power supply
- hermetically sealed TO-5 package
- assembly isolated to ground
- collimator lens
- components are in conformity with ROHS and WEEE

Applications

- common light-/radiation measuring applications
- detector for measuring of low radiation intensities with high signal to noise level
- spectroscopy
- medical diagnostics

Absolute Maximum Ratings

Item	Symbol	Value	Unit
Operation Voltage	U_{op}	± 18	V
Operating Temperature	T_{op}	-25 ... +85	°C
Storage Temperature	T_{st}	-40 ... +100	°C
Soldering Temperature *	T_{sol}	260	°C

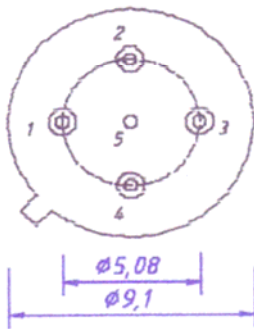
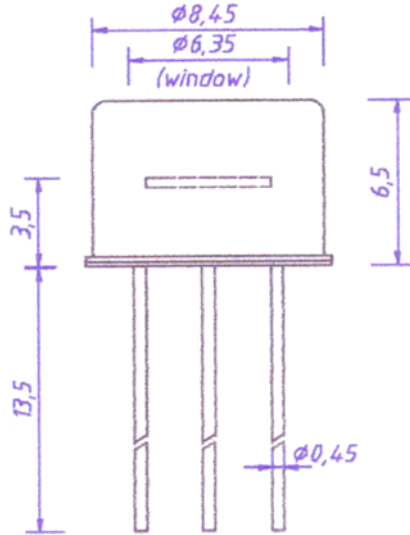
* must be completed within 3 seconds

Characteristics (25°C)

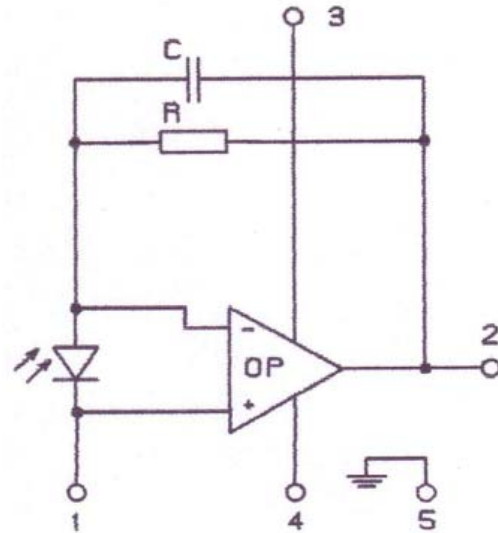
Item	Symbol	Test Conditions	IQ802L	IQ801L	IQ800L	Unit
Active Area	A		4,8			mm ²
Feedback Resistor	R		1	10	100	MΩ
Dark Offset Voltage	U_{offset}	E = 0 lx	± 0.5	± 0.5	± 2	mV
Noise Voltage	U_N	B = 20 kHz	0.2	0.3	0.5	mV _{rms}
Spectral Range	λ	S = 0,1*S _{max}	400 ... 1100			nm
Peak Sensitivity Wavelength	λ_p		850			nm
Responsivity at λ_p	S	S = S _{max}	0.6	6	60	mV/nW
Rise time	t_r		3	15	35	μs
Frequency Range	Δf	-3 dB	120	25	10	kHz
Opening Angle		S(φ)=0,5* S _{max} *cos(φ)	± 50			deg.
Saturation Voltage		R _L = 2 kΩ	-14,8 (-14,5)			V
Short Current			± 45			mA
Operation Voltage	U_{op}		$\pm 5 ... \pm 15$			V
Current Consumption			2.2 (2.6)			mA



Package Dimension



Internal Circuit



- 1 ... GND
- 2 ... Out
- 3 ... +V_s
- 4 ... -V_s
- 5 ... Case

Responsivity Curve

