ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44, OFFICE@ROITHNER-LASER.COM

Si – photodiode with integrated transimpedance amplifier

IQ 800 L
IQ 801 L
IQ 802 L

characteristics:

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

applications:

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

maximum ratings:

operating voltage	±18 V
operating temperature range	-25°C … +85°C
storage temperature range	-40°C … +100°C
welding temperature (3s)	260°C

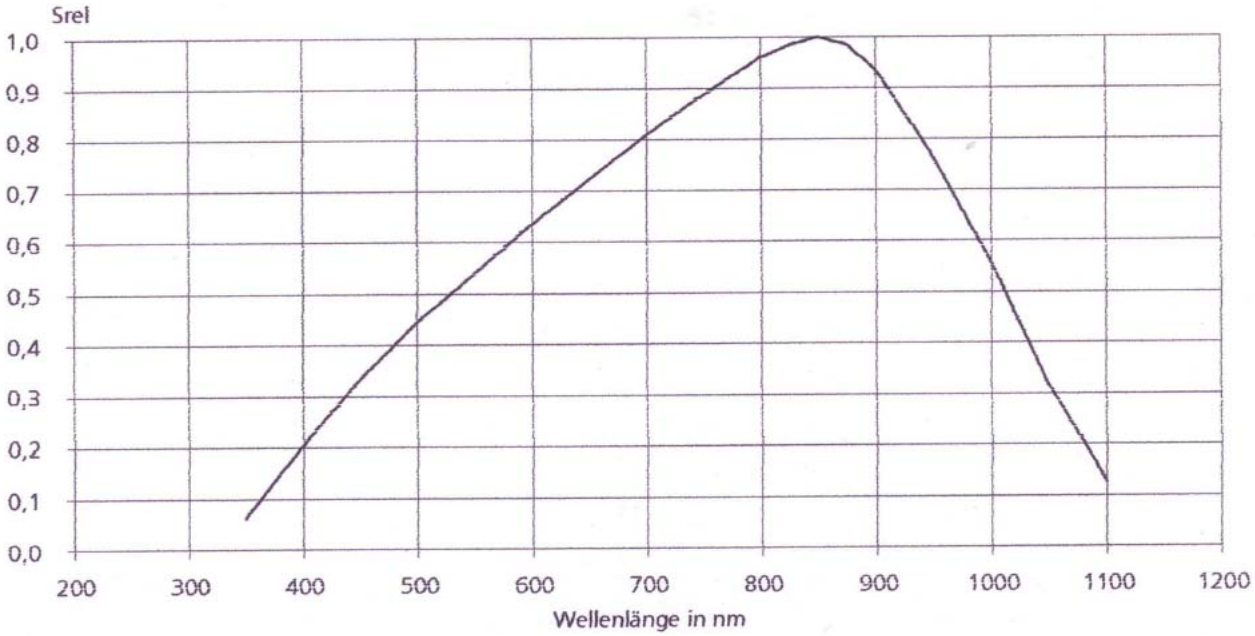
ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44, OFFICE@ROITHNER-LASER.COM

technical data:

common test conditions, as not otherwise specified: T_A = 25°C, V_S = ±15V
typ. Data, maximum data in brackets

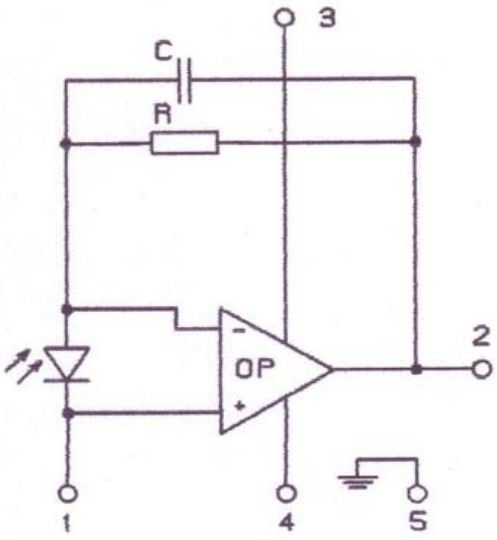
parameter	testcondition	IQ802L	IQ801L	IQ800L	unit
active area		4,8			mm²
feedback resistor		1	10	100	MΩ
dark offset voltage	E = 0 lx	± 0,5	± 0,5	± 2	mV
noise voltage	B = 20 kHz	0,2	0,3	0,5	mV_{rms}
spectral range	$S = 0,1*S_{max}$	400 … 1100			nm
max. of spectral responsivity	$S = S_{max}$	850			nm
max. spectral responsitiy	$S = S_{max}$	0,6	6	60	mV/nW
rise time		3	15	35	µs
bandwidth	-3 dB	120	25	10	kHZ
opening angle	$S(\varphi)=0,5*S_{max}*\cos(\varphi)$	± 50			Grad
saturation voltage	R_L = 2 kΩ	-14,8 (-14,5)			V
short current		± 45			mA
operation voltage		± 5 … ± 15			V
current consumption		2,2 (2,6)			mA

realtive spectral responsivity



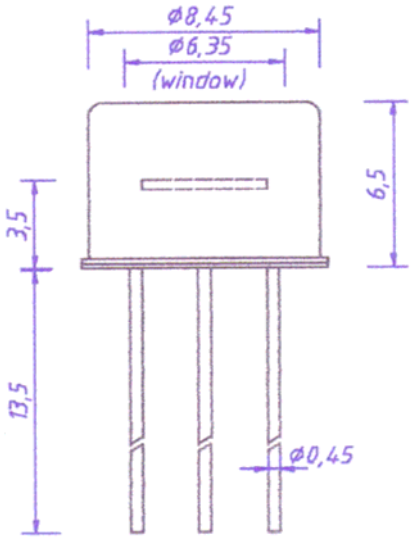
ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44, OFFICE@ROITHNER-LASER.COM

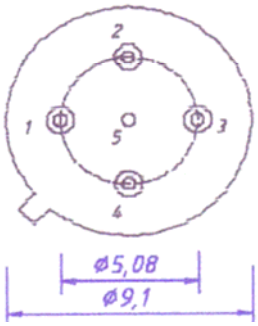
internal circuit



1 GND
2 Out
3 $+V_S$
4 $-V_S$
5 Case

package dimensions





(bottom view)