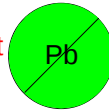


This component is RoHS compliant



OPI-110 Series

Optically Coupled Isolators

ATEX and IECEx CERTIFIED

The OPI-110, A/B/C and D are a family of optically coupled isolators, each consisting of an infrared light emitting diode, coupled to an NPN silicon phototransistor sealed in an injection moulded plastic housing. This series is designed for applications requiring high voltage isolation between input and output.

All electrical parameters are 100% tested by manufacturing. Specifications are guaranteed to a 0.65% AQL.

- 10 KV electrical rating
- High current transfer ratio- 100% min @ 1mA If.



CERTIFICATE BAS01ATEX1278U/2

Confirmed conform to:-

EN60079-0:2006 EN61241-0:2006
EN60079-11:2007 EN61241-11:2006
EN60079-26:2004

Conditions of use apply:- See 'Schedule of limitations' on certificate



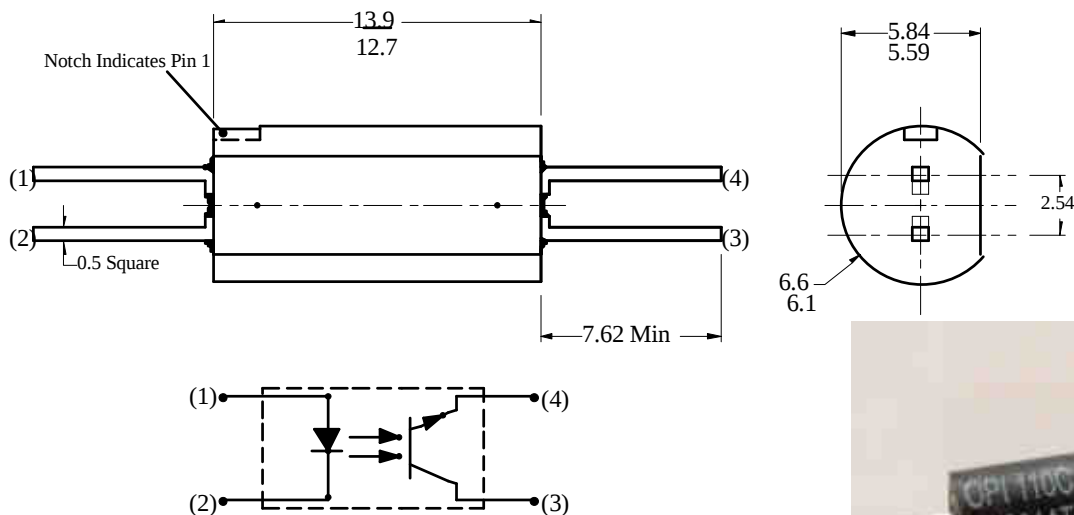
CERTIFICATE IECEx BAS 06.0021U/1

Designed and manufactured to:-

IEC 60079-0: 2000 Edition 3.1
IEC 60079-11 :1999 Edition 4
IEC 60097-26 :2004 Edition 1

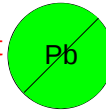
Conditions of use apply:- See 'Schedule of limitations' on certificate.

MECHANICAL DATA



BEDFORD OPTO TECHNOLOGY LTD
1,BIGGAR BUSINESS PARK, BIGGAR, LANARKSHIRE, ML12 6FX
Tel: +44 (0) 1899 221221 Fax: +44 (0) 1899 221009
Website: bot.co.uk E-mail: bill@bot.co.uk

This
component
is RoHS
compliant



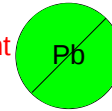
ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise noted)

INPUT DIODE	
FORWARD DC CURRENT	50mA (3)
REVERSE DC VOLTAGE	2V
POWER DISSIPATION	100mW (4)
OUTPUT PHOTOTRANSISTOR	
COLLECTOR-EMITTER VOLTAGE	30 V
EMITTER-COLLECTOR VOLTAGE	5 V
POWER DISSIPATION	100 mW (5)
OPERATING TEMP	-40°C TO +85°C
STORAGE TEMP	-40°C TO +85°C
INPUT-TO-OUTPUT ISOLATION VOLTAGE	±10KV DC (1)
LEAD SOLDERING TEMP (2) (1.6mm) from case for 5sec with soldering iron)	240°C

NOTES

- 1 Measured with input diode leads shorted together and output leads shorted together.
- 2 RMA Flux is recommended. Duration can be extened to 10 sec. max. when flow soldering.
- 3 Derate linearly 0.73 mA/ C above 25 C
- 4 Derate linearly 1.67 mA/ C above 25 C
- 5 Derate linearly 1.67 mA/ C above 25 C

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OPTO ELECTRONIC DATA ($T_A = 25^\circ\text{C}$)This
component
is RoHS
compliant

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDIS- TIONS
INPUT DIODE						
Forward Voltage	V_F			1.5	V	$I_f = 20\text{mA}$
Reverse Current	I_R			100	μA	$V_R = 2\text{V}$
OUTPUT PHOTOTRANSISTOR						
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30			V	$I_c = 1\text{mA}$ $I_f = 0$
Emitter-Collector Breakdown Voltage	$V_{(BR)ECO}$	5			V	$I_e = 100\mu\text{A}$
Collector-Emitter Dark Current	I_{CEO}			100	nA	$V_{ce} = 10\text{V}$
COUPLED CHARACTERISTICS						
DC Current transfer ratio	I_c/I_f					
OPI 110A		25			%	$I_f=10\text{mA}$, $V_{ce}=5\text{V}$
OPI 110B		50			%	$I_f=10\text{mA}$, $V_{ce}=5\text{V}$
OPI 110C		100			%	$I_f=10\text{mA}$, $V_{ce}=5\text{V}$
OPI 110D		100			%	$I_f=1\text{mA}$, $V_{ce}=5\text{V}$
Isolation Voltage	V_{ISO}	10			KV	See Note (1)
Collector-emitter saturation voltage	$V_{CE(SAT)}$			0.4	V	$I_f=10\text{mA}$, $I_c=1.6\text{mA}$
Input-output capacitance	C_{io}		0.06		pF	
Turn-on time	t_{on}		5		μS	$I_c=10\text{mA}$, $V_{cc}=10\text{V}$, $R_L=100\text{ohm}$
Turn-off time	t_{off}		5		μS	$I_c=10\text{mA}$, $V_{cc}=10\text{V}$, $R_L=100\text{ohm}$

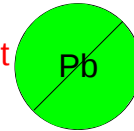
NOTE:

Measured with input diode leads shorted together and output leads shorted together.
(Sample testing only).

BEDFORDOPTO TECHNOLOGY LTD
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**CONFORMITY STATEMENT
OPI110 SERIES**

This
component
is RoHS
compliant



Manufacturer:- BEDFORD OPTO TECHNOLOGY LTD

Address:- 1 Biggar Business Park, Market Road, Biggar,
Lanarkshire, ML12 6FX, Scotland

Directive 94/9/EC

EC-Type Examination Certificate:-

BAS01ATEX1278U – Latest supplement BAS01ATEX1278U/2 issued 30.10.07

Provisions of the Directive fulfilled by the component:-

GroupII Category 1GD

EexialIC

Notified Body for EC-Type Examination & Production:- BaseefaLtd. – No. 1180

Baseefa Ltd.

Rockhead Business Park,

Staden Lane,

Buxton,

Derbyshire SK17 9RZ,

England

Tel:- +44 (0)1298 766600

Fax:- +44 (0)1298 766601

e-mail:- info@baseefa.com

Harmonised Standards used:-

EN60079-0:2006

EN60079-11:2007

EN61241-11:2006

Other Standards used:-

EN60079-26:2004 – (confirmed by Notified Body unit complies in all respects)

EN61241-0:2006 – (State of the Art – intended for harmonisation)

On Behalf of Bedford Opto Technology Ltd., I declare that, the date the component accompanied by this statement is placed on the market, the component conforms with all technical and regulatory requirements of the ATEX Directive 94/9/EC.

Mr R.W.Stott
Managing Director