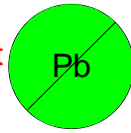


This component is RoHS compliant



# OPI 2000M High Speed Opto Isolator Surface Mount ATEX and IECEx certified

The OPI 2000M High Speed Optically Coupled Isolator consists of a High Speed Infrared emitter coupled to a silicon photo I.C. The unit is designed for applications requiring high voltage isolation between input & output.

- Surface Mount in Tape & Reel
- 10KV isolation

High Speed 2Mb/sec.  
Low Propagation Delay



## CERTIFICATE ATEX BAS01ATEX1285U/3

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

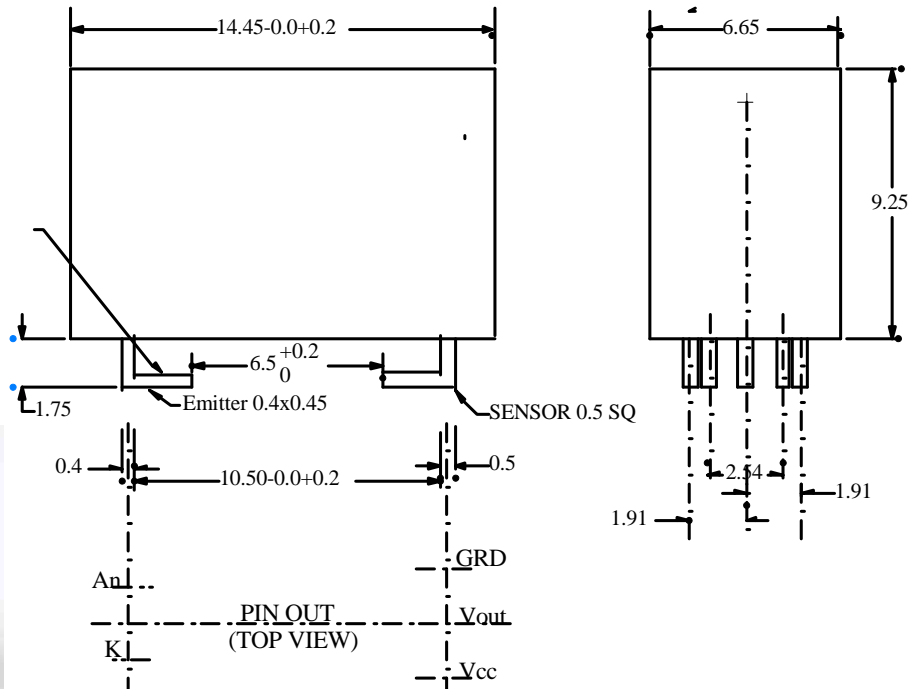
Designed and manufactured to:-

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

SURFACE MOUNT LEAD FORM  
CONDITIONS OF USE APPLY



**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

ISS J 21.07.08

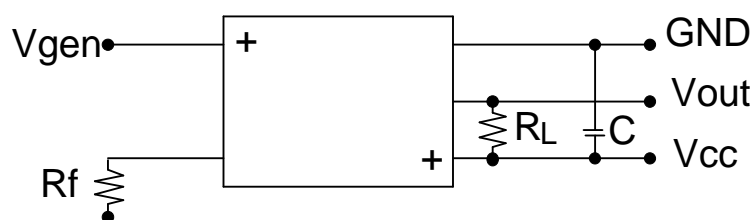
**ABSOLUTE MAXIMUM RATINGS** (25°C unless otherwise noted)

INPUT DIODE FORWARD DC CURRENT REVERSE DC VOLTAGE POWER DISSIPATION	100mA 5 Volts 150mW (ii)
OUTPUT IC MAX SUPPLY VOLTAGE POWER DISSIPATION	7 Volts 165mW
OPERATING TEMP	-40°C TO +80°C
STORAGE TEMP	-40°C TO +85°C
INPUT-TO-OUTPUT ISOLATION VOLTAGE	± 10KV DC (i)

- i) Measured with the input leads and output leads shorted together for one min.  
ii) Thermal resistance 450 K/W

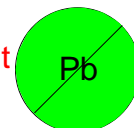
Whilst the devices are capable of operating continually at the noted elevated temperatures users should be aware of the possibility of the need to increase the diode current to trigger the device over long periods at high temperatures & currents.

## CIRCUIT



$$R_L = 560 \text{ ohm} \quad C = 0.01 \mu\text{F}$$

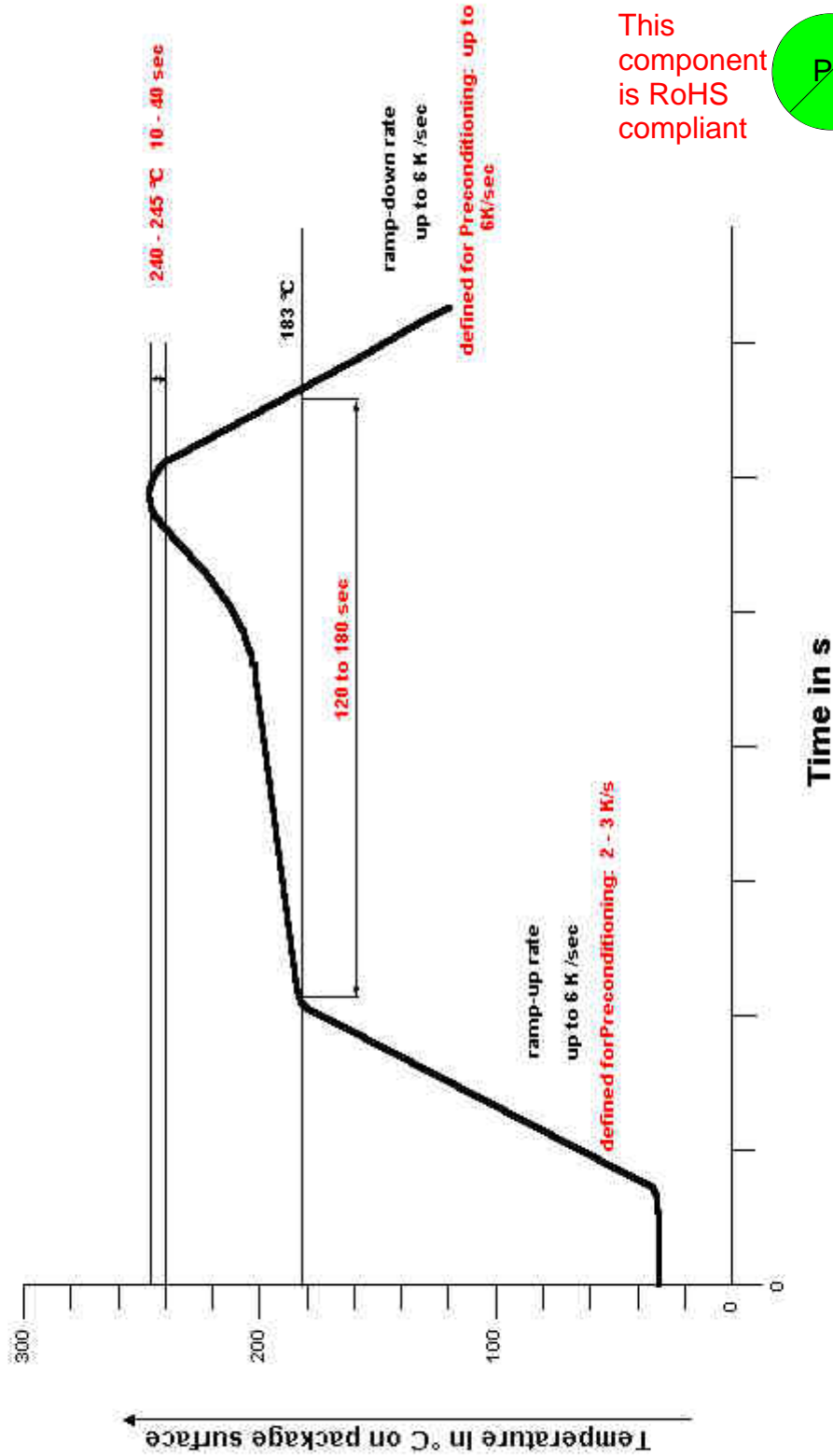
This component  
is RoHS  
compliant

**Packing**

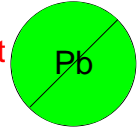
Waffle Trays - 100 per tray 290mm x 200mm.

Tape & Reel - 300 Devices per 13" Diam Reel with 7" Hub 24mm Wide tape.

IR Reflow soldering profile conforming to IPC9501



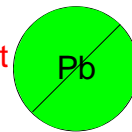
This component is RoHS compliant



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**OPTO ELECTRONIC DATA** (TA = 25°C)

This  
component  
is RoHS  
compliant

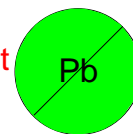


PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
<b>INPUT DIODE</b>						
Forward Voltage	V <sub>F</sub>	-	1.35	1.6	V	I <sub>F</sub> =100mA tp=20mS
Reverse Voltage	V <sub>R</sub>	5.0	-	-	V	I <sub>r</sub> = 100uA
<b>OUTPUT IC ( Vcc=4.75 to 5.25 )</b>						
High level Output Current	I <sub>CH</sub>		-	100	uA	I <sub>c</sub> = 10 uA
Low Level Output Voltage	V <sub>OL</sub>		-	0.6	V	I <sub>F</sub> =10mA I <sub>OL</sub> =2.6mA
High Level Supply Current	I <sub>CCH</sub>			15	mA	I <sub>F</sub> =0
Low Level Supply Current	I <sub>CCL</sub>			18	mA	I <sub>F</sub> =7.5mA
<b>COUPLED(Vcc=5volts)</b>						
Propagation Delay to Low Output level	t <sub>PLH</sub>			800	nSecs	R <sub>L</sub> =560ohms C=0.01uF
Propagation Delay to High Output Level	t <sub>PHL</sub>			800	nSecs	ditto
Input/Output Isolation Voltage	V <sub>i-o</sub>	10kV			Volts	Input and output leads shorted

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CONFORMITY STATEMENT  
OPI2000M 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:-

BAS01ATEX1285U – Latest supplement BAS01ATEX1285U/3 issued 30.10.07

Provisions of the Directive fulfilled by the component:-

Group II 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.

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Mr R.W.Stott  
Managing Director