

OPI 1000L Series

Optically Coupled Isolators

Surface Mount Low Profile

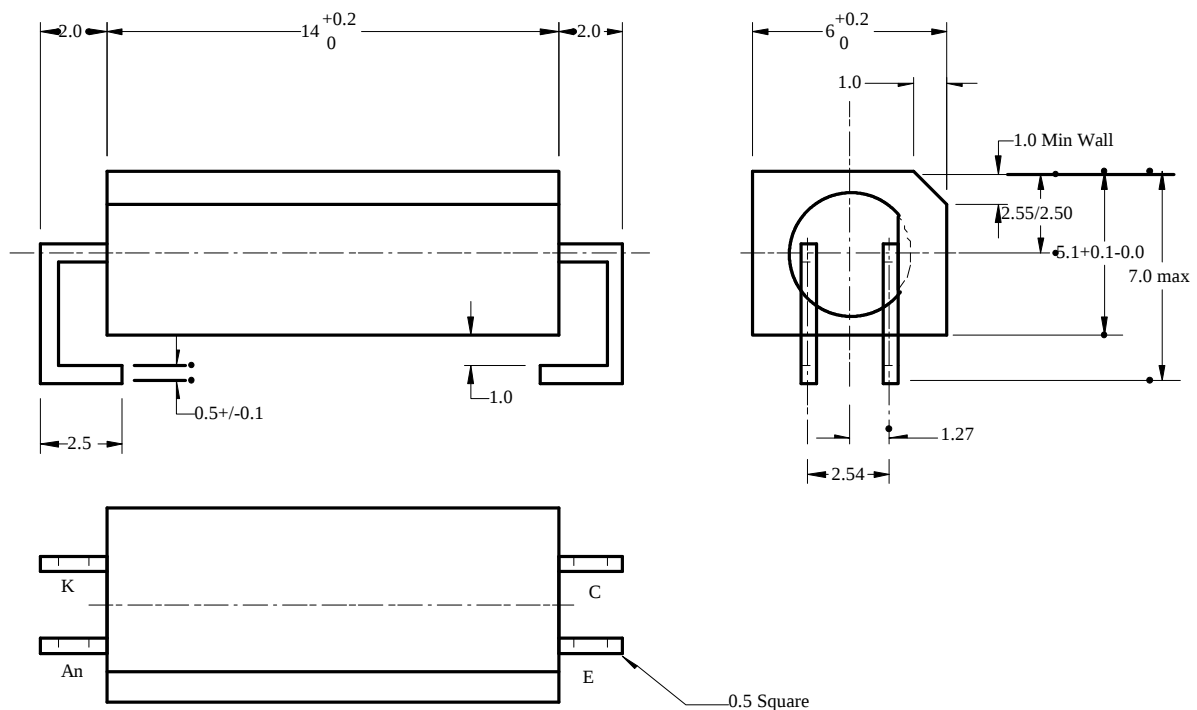
BASEEFA CERTIFIED

The OPI 1000 A through E are a series of Optically Coupled Isolators each consisting of a Infrared emitter coupled to a silicon photo transistor. The series is designed for applications requiring high voltage isolation between input & output.

- Surface Mount configuration in Tape & Reel
- 10KV isolation
- High Current Transfer ratio- 40% min @ 1mA If
- Low Profile



MECHANICAL DATA



BEDFORD OPTO TECHNOLOGY LTD
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Tel: +44 (0) 1899 221221 Fax: +44 (0) 1899 221009

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ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise noted)

OPI 1000L

INPUT DIODE FORWARD DC CURRENT REVERSE DC VOLTAGE POWER DISSIPATION	100mA 5 Volts 165mW (ii)
OUTPUT TRANSISTOR COLLECTOR-EMITTER VOLTAGE COLLECTOR CURRENT POWER DISSIPATION	35 Volts 15 mA 165mW (iii)
OPERATING TEMP	-25°C TO +100°C
<u>STORAGE TEMP</u>	-25°C TO +100°C
INPUT-TO-OUTPUT ISOLATION VOLTAGE	<u>±</u> 10KV DC (i)

- i) Measured with the input leads and output leads shorted together for one min.
- ii) Thermal resistance 375 K/W
- iii) 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 a reduction in CTR over long periods at high temperatures & currents.

BASEEFA Certified
BAS No. Ex 95C2215UEExia IIC

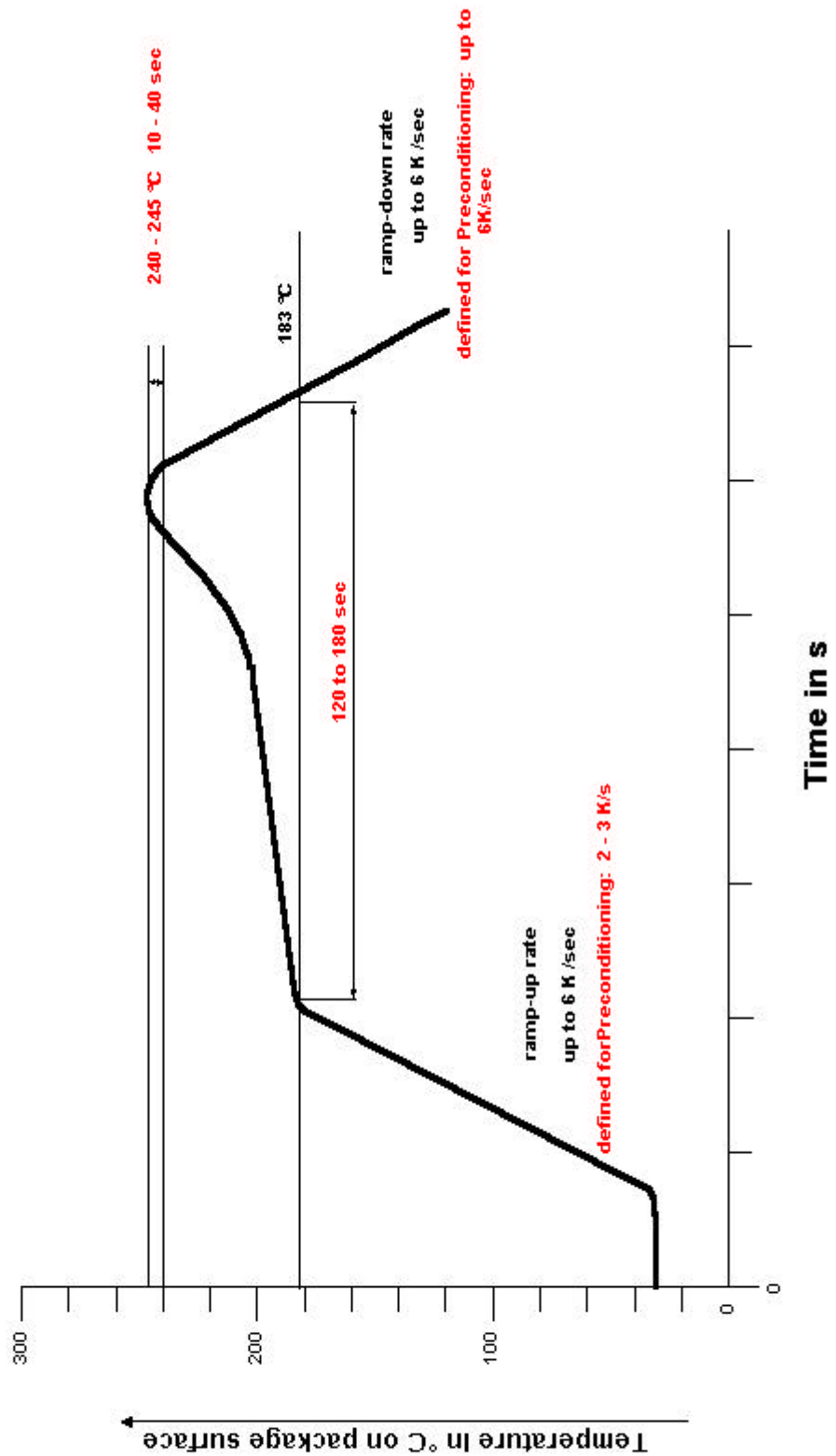
Packing

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

Tape & Reel - 400 Devices per 13" Diam Reel with 7" HuB 32mm Wide tape.

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IR Reflow soldering profile conforming to IPC9501



PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDI- TIONS
INPUT DIODE						
Forward Voltage	V _F	-	-	1.3	V	If = 20mA
Reverse Voltage	V _R	5.0	-	-	V	Ir = 100uA
OUTPUT TRANSISTOR						
Collector-Emitter Breakdown Voltage	BV _{ceo}	35	-	-	V	Ic = 10 uA
Collector-Emitter Leakage Current	Iceo	OPI1000IE	-	10	nA	Vce = 30 V
		OPI1000IA to C	-	100	nA	Vce = 10 V
Emitter-Collector Breakdown	BV _{eco}	5.0	-	-	V	Ic = 100uA
COUPLED PAIR						
DC Current Transfer Ratio	I _C /I _F					
OPI 1000L A	-	25	-	-	%	If = 10 mA Vce = 5 V
OPI 1000L B	-	50	-	-	%	If = 10 mA Vce = 5 V
OPI 1000L C	-	100	-	-	%	If = 10 mA Vce = 5 V
OPI 1000L E	-	40	-	-	%	If = 1mA Vce = 5 V
Isolation Voltage	V _{ISO}	10	-	-	KV	-
Collector-emitter saturation voltage	V _{CE(SAT)}	-	-	0.4	V	If = 10 mA, Ic=1.6mA
Turn-on time	t _{on}	-	8	-	uS	Ic=2mA
Turn-off time	t _{off}	-	8	-	uS	Vcc = 5V RL = 100ohm

OPTO ELECTRONIC SOLUTIONS

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