

OPI 3000MC

Optically Coupled Isolator

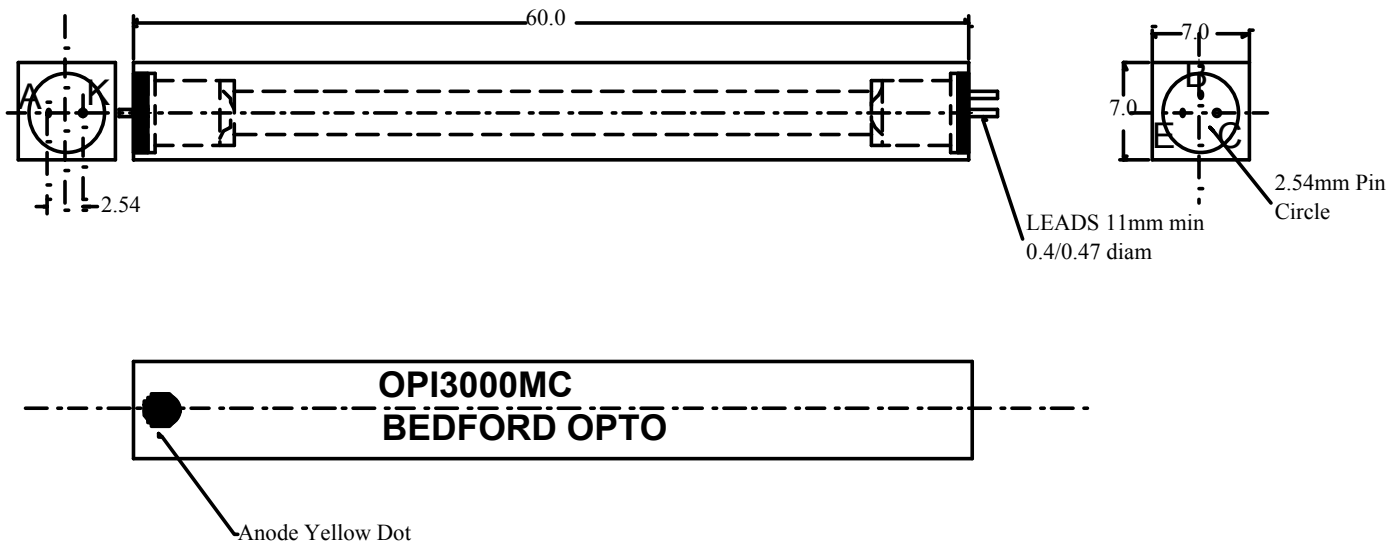
30kV Isolation

The OPI 3000P Optically Coupled Isolator consist of a Infrared emitter coupled to a silicon photo transistor by a polymer fibre. The series is designed for applications requiring high voltage isolation between input & output.

- 30kV Isolation
- High current transfer ratio, >50% @10mA
- Plastic component version OPI3000P available.

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MECHANICAL DATA



ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise noted)

INPUT DIODE	
FORWARD DC CURRENT	250mA
REVERSE DC VOLTAGE	5 Volts
POWER DISSIPATION	170mW (ii)
OUTPUT TRANSISTOR	
COLLECTOR-EMITTER VOLTAGE	70 Volts
COLLECTOR CURRENT	50 mA
POWER DISSIPATION	250mW (iii)
OPERATING TEMP	-25°C TO +100°C
STORAGE TEMP	-25°C TO +100°C
INPUT-TO-OUTPUT ISOLATION VOLTAGE	±30KV DC (i)
SOLDERING TEMP 1.6mm from body max 5secs	240 °C

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

1/2

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- i) Based on mechanical spacing, not measured
- ii) Thermal resistance 450 K/W
- iii) Thermal resistance 400 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.

OPTO ELECTRONIC DATA (TA = 25°C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDI-TIONS
INPUT DIODE						
Forward Voltage	V _F	-	-	1.3	V	I _f = 20mA
Reverse Voltage	V _R	5.0	-	-	V	I _r = 100uA
OUTPUT TRANSISTOR						
Collector-Emitter Breakdown Voltage	BV _{ceo}	70	-	-	V	I _c = 10 uA
Collector-Emitter Leakage Current	I _{ceo}	-	-	10	nA	V _{ce} = 10 V
Emitter-Collector Breakdown	BV _{eco}	5.0	-	-	V	I _c = 100uA
COUPLED PAIR						
DC Current Transfer Ratio	I _C /I _F					
OPI 3000P	-	50	-	-	%	I _f = 10 mA V _{ce}
Isolation Voltage	V _{ISO}	30	-	-	KV	-
Collector-emitter saturation voltage	V _{CE(SAT)}	-	-	0.4	V	I _f = 10 mA,
Turn-on time	t _{on}	-	8	-	uS	I _c =2mA
Turn-off time	t _{off}	-	8	-	uS	V _{cc} = 5V

OPTO COUPLER RANGE

OPI110 TUBULAR 10kV ATEX CERTIFIED

OPI1264 TUBULAR 10kV ATEX CERTIFIED

OPI1000L SURFACE MOUNT ATEX CERTIFIED

OPI2000M HIGH SPEED SURFACE MOUNT ATEX CERTIFIED

OPI2000MK HIGH SPEED HIGH CMR

BOT32 PHOTO RESISTOR OUTPUT

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2/2