

# OPI 2000MK High Speed Opto Isolator

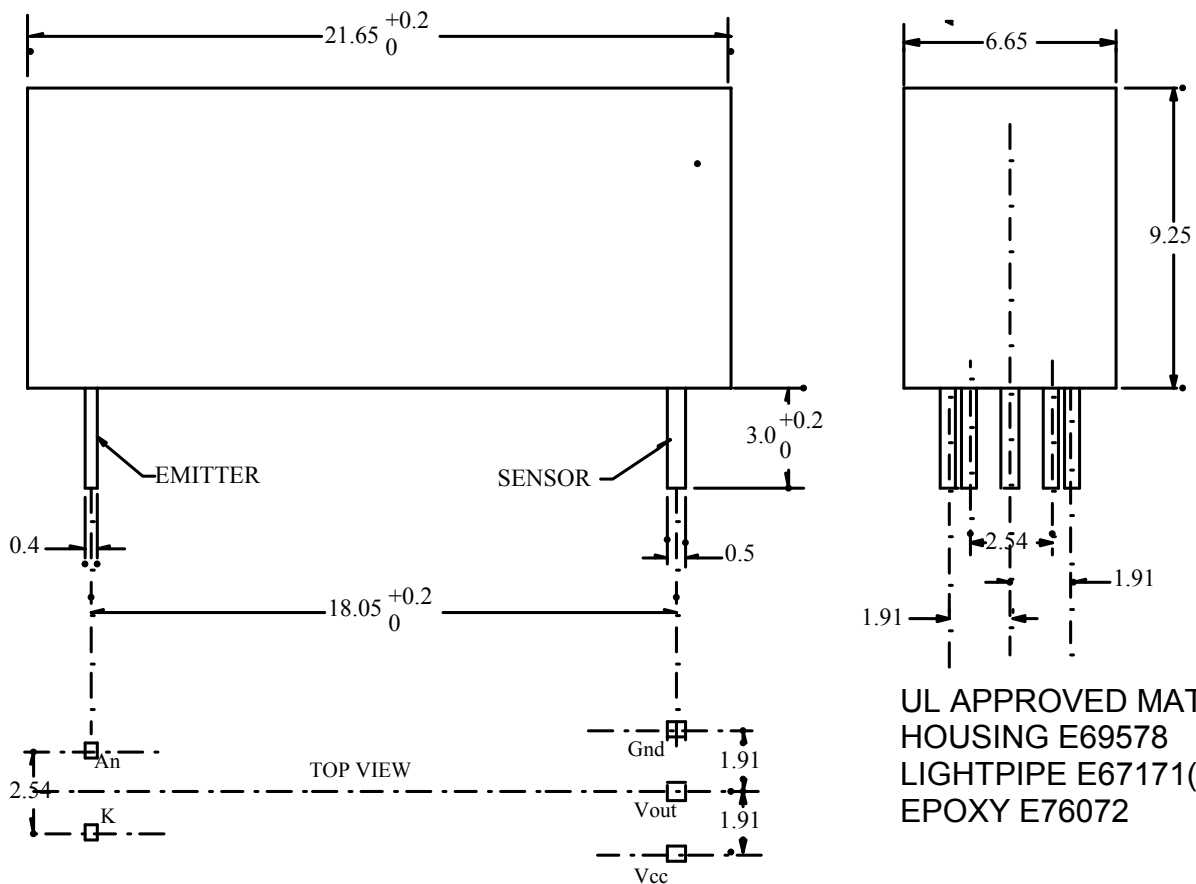
The OPI 2000MK High Speed Optically Coupled Isolator consists of a High Speed Infrared emitter coupled to a silicon photo I.C. The unit is designed for applications requiring high voltage isolation between input & output requirements.

- The Opto Logic sensor has a metal screen connected to the ground lead for High Common mode rejection.
- 10KV isolation
- High Speed 2Mb/sec.
- Low Propagation Delay



OTHER COUPLERS IN THE SERIES:-  
OPI2000M ATEX CERTIFIED SURFACE MOUNT  
OPI2000 AS THE OPI2000MK WITHOUT MASK

## MECHANICAL DATA



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

OPI 2000MK

<b>INPUT DIODE</b> FORWARD DC CURRENT REVERSE DC VOLTAGE POWER DISSIPATION	100mA 5 Volts 150mW (ii)
<b>OUTPUT IC</b> MAX SUPPLY VOLTAGE POWER DISSIPATION	7 Volts 165mW
<b>OPERATING TEMP</b>	-40°C TO +70°C
<b>STORAGE TEMP</b>	-40°C TO +85°C
<b>LEAD SOLDERING TEMP 2mm from body 5 secs max</b>	260°C
<b>INPUT-TO-OUTPUT ISOLATION VOLTAGE</b>	±10KV DC (i)

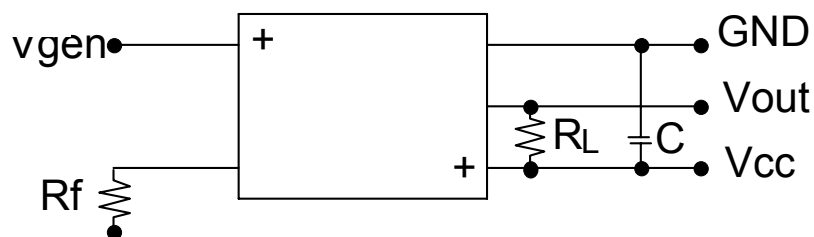
i) Measured with the input leads and output leads shorted together for one min.

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 &

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 ( V<sub>cc</sub>=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> =10mA
<b>COUPLED(V<sub>cc</sub>=5volts)</b>						
Propagation Delay to Low Output	t <sub>PHL</sub>			800	nSecs	R <sub>L</sub> =560ohms C=0.01uF
Propagation Delay to High Output	t <sub>PLH</sub>			800	nSecs	ditto

## CIRCUIT



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

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