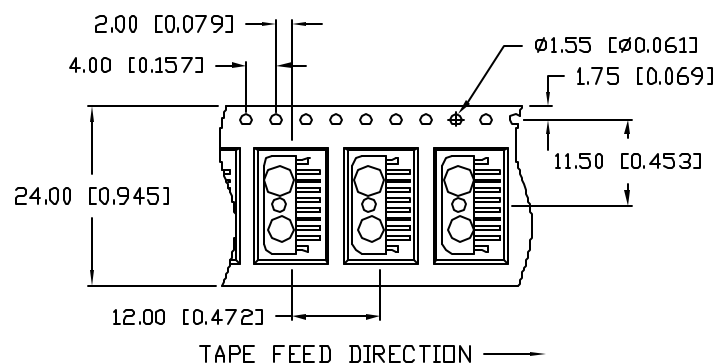
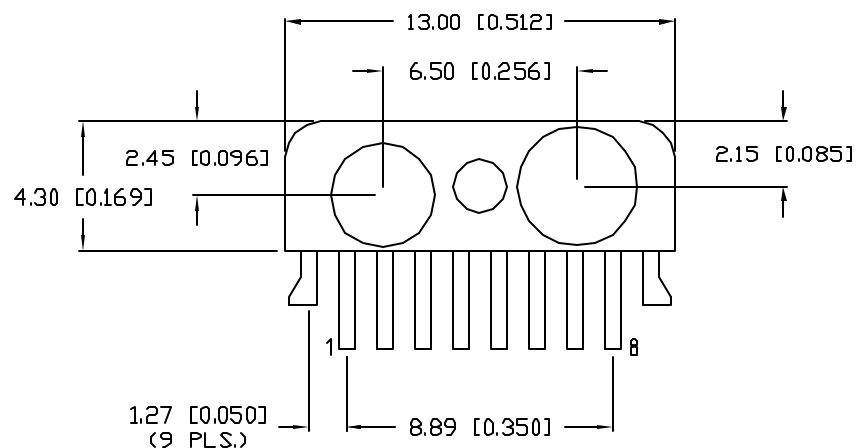
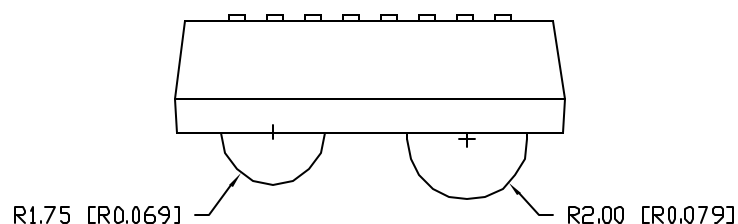
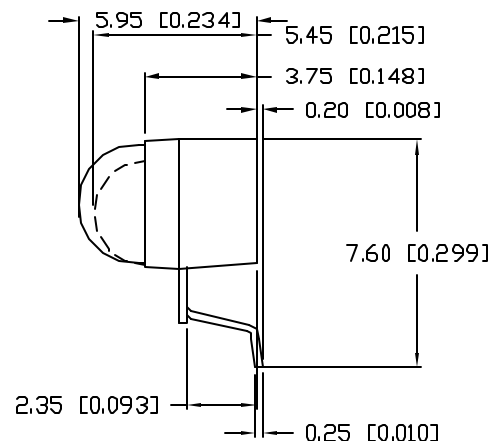


OED-IRDA1343

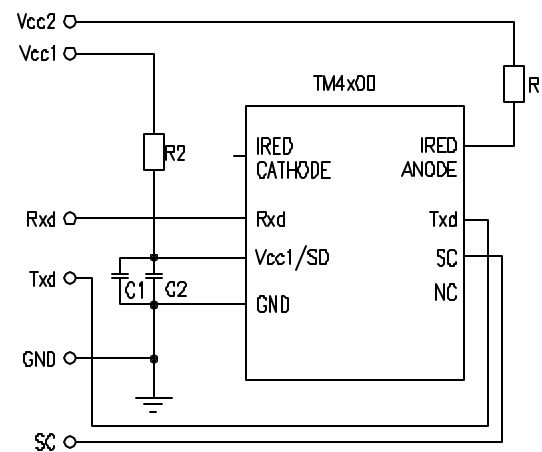
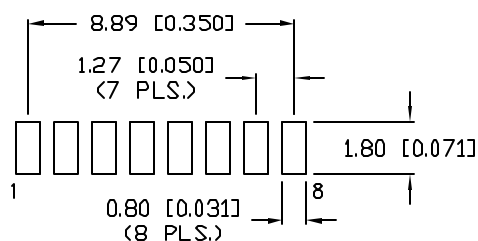
PRELIMINARY IN P/N DIR



TAPE FEED DIRECTION →

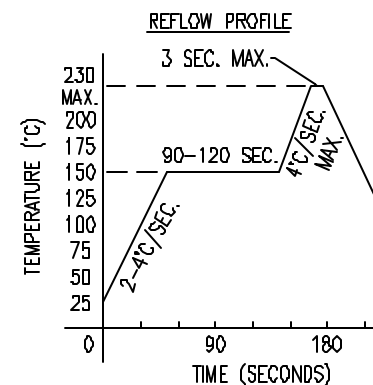


RECOMMENDED SOLDER PAD LAYOUT



NOTES:

C1: 4.7uF
 C2: 0.1uF
 R1: 140, 0.25W
 R2: 470, 0.125W



UNCONTROLLED DOCUMENT

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±0.127 (±0.005), LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030), MIN.=+0.00, MAX.=+0.00, DECIMAL PRECISION

REV.

PART NUMBER

OED-IRDA1343

INFRARED DATA TRANSCEIVER MODULE.

CONFIDENTIAL INFORMATION

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.

RELIABILITY NOTE

OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.



290 E. HELEN ROAD
 PALATINE, IL 60067-6976
 PHONE: +1.847.359.2790
 US WEB: www.lumex.com
 TW WEB: www.lumex.com.tw

DRAWN BY:

CHECKED BY:

APPROVED BY:

CT

DATE: 2.11.03

PAGE: 1 OF 2

SCALE: N/A

PRELIMINARY IN P/N DIR

ELECTRO-OPTICAL CHARACTERISTICS $T_A=25^{\circ}\text{C}$

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
TRANSCIEVER						
SUPPLY VOLTAGE	V_{cc}	RECIEVE MODE	2.7		5.5	V
		X-MIT MODE	2.0		5.5	V
SUPPLY CURRENT	$I_{cc1(Rx)}$	$V_{cc1}=5.5\text{V}$		1.3	2.5	mA
RECEIVE MODE		$V_{cc2}=2.7\text{V}$		1.0	1.5	mA
SUPPLY CURRENT	$I_{cc1(Tx)}$	$I_{RED}=210\text{mA}$		5.0		mA
TRANSMIT MODE		(AT IRED ANODE)		3.5		mA
		$V_{cc1}=5.5\text{V}$			5.5	mA
		$V_{cc2}=2.7\text{V}$			4.5	mA
LEAKAGE CURRENT OF IR EMITTER, IRED ANODE PIN	I_L	$V_{cc1}=\text{OFF}, \bar{X}_D=\text{LOW},$ $V_{cc2}=6\text{V}$		0.005	0.5	mA
TRANCIEVER POWER ON SETTING TIME	T_{pon}			50		ms
RECEIVER						
MINIMUM DETECTION THRESHOLD IRRADIANCE	E_e	SC=LOW SC=HIGH		20 6	35 15	mW/m^2
MAXIMUM DETECTION THRESHOLD IRRADIANCE	E_e	$V_{cc1}=5\text{V}$ $V_{cc1}=3\text{V}$	3300 8000	5000 15000		mW/m^2
LOGIC LOW RECEIVER INPUT IRRADIANCE	E_e				4	mW/m^2 $\mu\text{W}/\text{m}^2$
OUTPUT VOLTAGE	V_{al}	ACTIVE		.5	.8	V
RXD	V_{oh}	NON ACTIVE	$V_{cc}-0.5$			V
OUTPUT CURRENT RXD	I_{ol}			4		mA
RISE TIME RXD	T_r	$C=15\text{pF}, R=2.2\text{k}\Omega$	20		1400	ns
FALL TIME RXD	T_f	$C=15\text{pF}, R=2.2\text{k}\Omega$	20		200	ns
PULSE WIDTH RXD	T_p	115.2kbit/s	1.41		8	us
OUTPUT	T_p	115.2kbit/s	1.4		8	us
JITTER, LEADING EDGE OF OUTPUT SIGNAL	T_i	10 bit			2	us
LATENCY	T_l	115.2kbit/s			100	us

LIMITS OF SAFE OPERATION $T_A=25^{\circ}\text{C}$

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
SUPPLY VOLTAGE	V_{cc}	$0V \leq V_{cc} \leq 6V$	-0.5		6	V
INPUT CURRENT		EXCEPT IRED ANODE			10	mA
OUTPUT SINK CURRENT					25	mA
POWER DISSIPATION	P_D				200	mW
AVERAGE IRED CURRENT	$I_{RED(DC)}$				100	mA
PULSE CURRENT*	$I_{RED(RP)}$				500	mA
DATA INPUT VOLTAGE	V_{TXD}		-0.5		$V_{cc}+0.5$	V
DATA OUTPUT VOLTAGE	V_{RXD}		-0.5		$V_{cc}+0.5$	V
OPERATING TEMP.	T_{amb}	-25°C TO $+85^{\circ}\text{C}$				$^{\circ}\text{C}$
STORAGE TEMP.	T_{stg}	-25°C TO $+85^{\circ}\text{C}$				$^{\circ}\text{C}$

* $T < 90\mu\text{s}$, $T_{on} < 20\%$ ELECTRO-OPTICAL CHARACTERISTICS $T_A=25^{\circ}\text{C}$

TRANSMITTER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
LOGIC LOW INPUT VOLTAGE	V_{il}		0		0.8	V
LOGIC HIGH INPUT VOLTAGE	V_{ih}		2.4		$V_{cc1}+0.5$	V
CONTROLLED CURRENT	I_f	$V_{cc}=2.4\sim 5.5\text{V}$	25	30	35	mA
RADIANT INTENSITY	I_e		45	140	200	mW/sr
PEAK WAVELENGTH			880		900	nm
HALF-WIDTH OF EMISSION				60		nm
RISE TIME				200	600	ns
FALL TIME				200	600	ns
OUTPUT RADIANT INTENSITY		LOGIC LOW			0.04	mW/sr
OPTICAL OVERSHOOT					25	%
RIISING EDGE PEAK-TO-PEAK JITTER		PERIOD=10bits			0.2	us

UNCONTROLLED DOCUMENT

REV.

PART NUMBER

OED-IRDA1343

INFRARED DATA TRANSCIEVER MODULE.

CONFIDENTIAL INFORMATION

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.

RELIABILITY NOTE

OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.



290 E. HELEN ROAD
PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
US WEB: www.lumex.com
TW WEB: www.lumex.com.tw

DRAWN BY:

CHECKED BY:

APPROVED BY:

DATE: 2.11.03

PAGE: 2 OF 2

SCALE: N/A

CT