



LITE-ON TECHNOLOGY CORPORATION

Property of LITE-ON Only

FEATURES

- * NON-CONTACT SWITCHING.
- * FAST SWITCHING SPEED.
- * FOR DIRECT PC BOARD OR DUAL-IN-LINE SOCKET MOUNTING.
- * CHOICE OF MOUNTING CONFIGURATION.

APPLICATION

- * FAX MACHINE
- * SCANNER
- * COPY MACHINE
- * DISK DRIVER

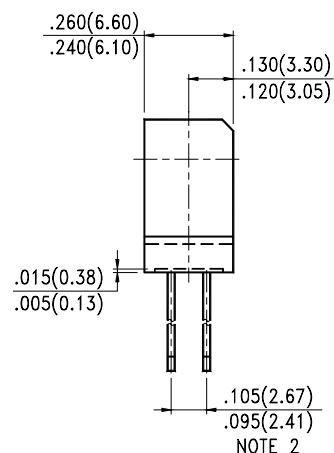
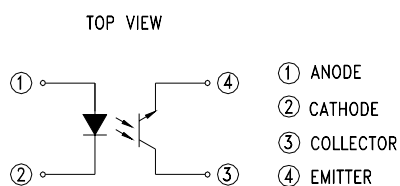
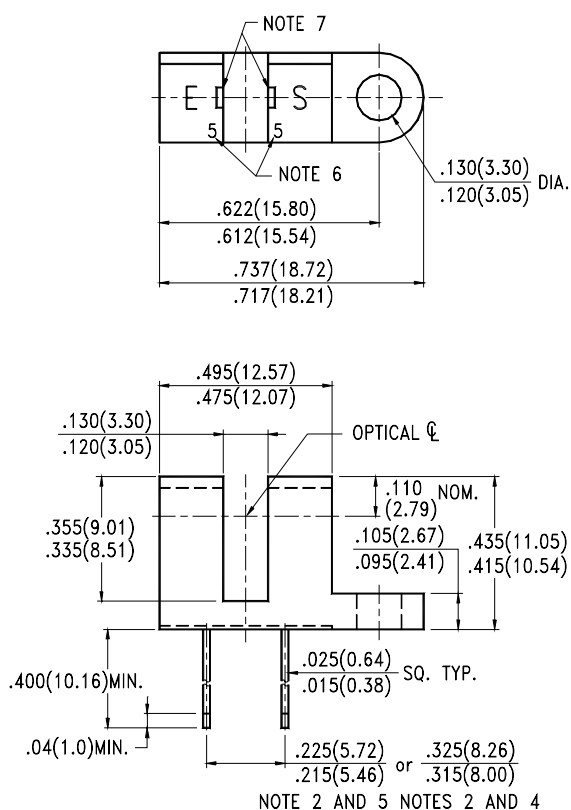
Part Numbering Guide

LTH - 8 X X - X X X

Basic Part Number	Aperture Width in front of Sensor (5) 5=. 050 in. (1.27mm) * 1=. 010 in. (. 25mm)
Housing Material	Aperture Lengths are 0.06 in. (1.52mm) *Available with Parameter A only
6=Polysulfone , IR Transmissive 7=Polysulfone,Opaque	
Mechanical and Electrical Spec.	Aperture Width in front of IRED (5) 5= .050 in. (1.27mm)
0=Electrical Parameter A Lead Spacing : .320 in.(8.13mm)	Mounting Configurations
1=Electrical Parameter B Lead Spacing : .320 in.(8.13mm)	T=Both Mounting Tabs.
2=Electrical Parameter C Lead Spacing : .320 in.(8.13mm)	P=Single Mounting Tabs, Sensor Side
5=Electrical Parameter A Lead Spacing : .220 in.(5.59mm)	L=Single Mounting Tabs, Emitter Side
6=Electrical Parameter B Lead Spacing : .220 in.(5.59mm)	N=No Mounting Tabs.
7=Electrical Parameter C Lead Spacing : .220 in.(5.59mm)	

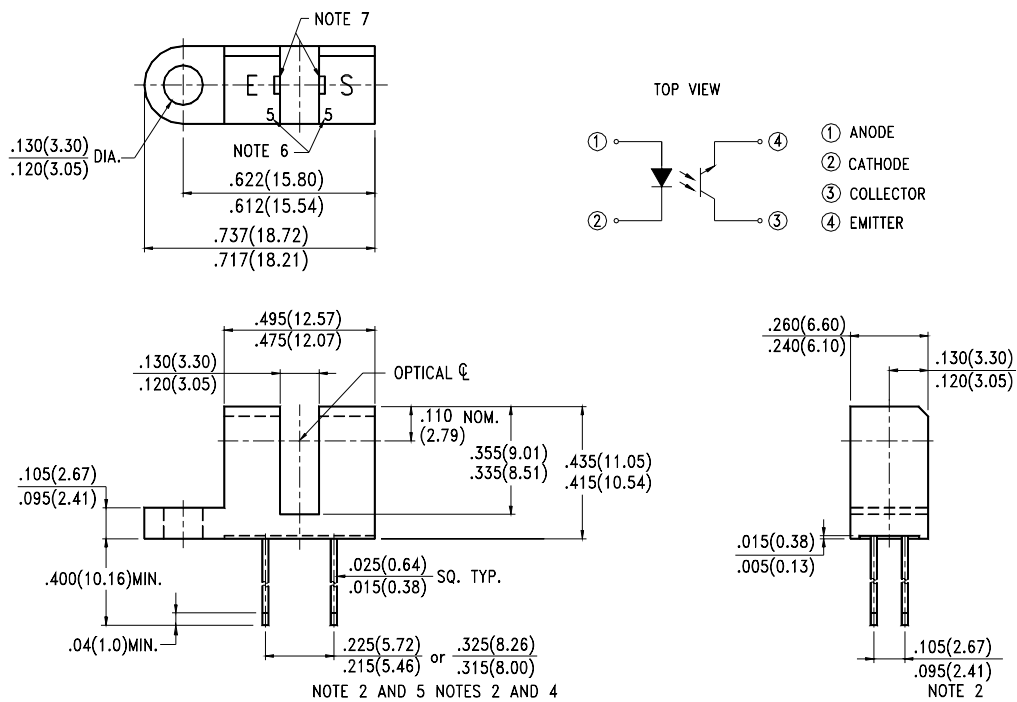
PACKAGE DIMENSIONS

Package Configuration P



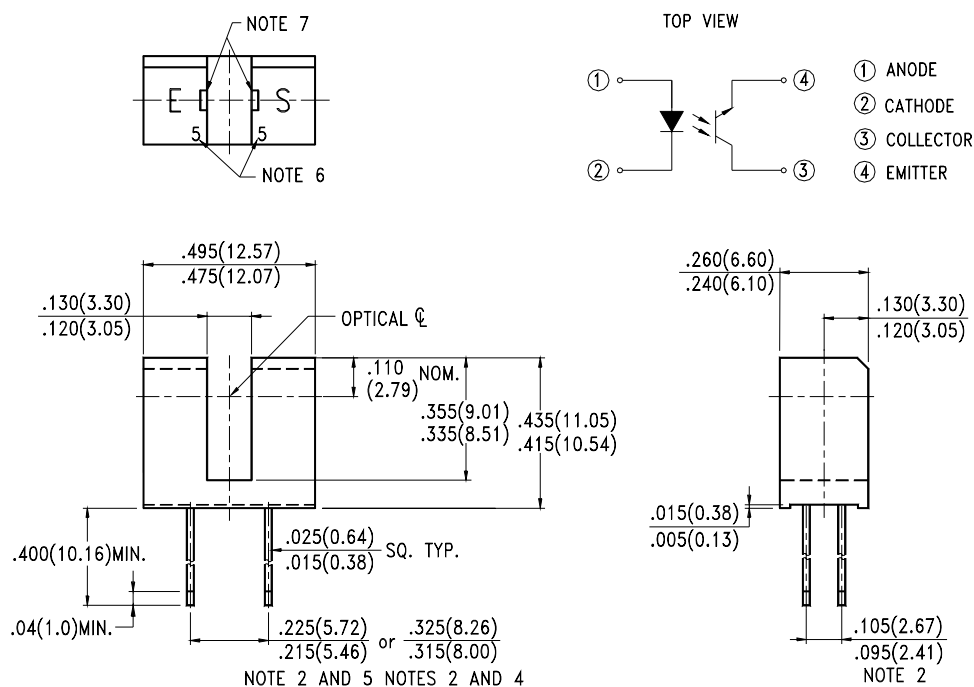
PACKAGE DIMENSIONS

Package Configuration L



PACKAGE DIMENSIONS

Package Configuration N



NOTES:

1. All dimensions are in inches (millimeters).
2. Dimension controlled at housing surface only.
3. Housing is soluble in chlorinated hydrocarbons and ketones.
4. LTH-860, LTH-861, LTH-862, LTH-870, LTH-871, LTH-872.
5. LTH-865, LTH-866, LTH-867, LTH-875, LTH-876, LTH-877.
6. Molded number to identify aperture size. See part number guide.
7. Dimensions of aperture opening dependent on housing material. See part number guide.
8. Housing shown are opaque polysulfone.



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ABSOLUTE MAXIMUM RATINGS AT T_A=25°C

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
INPUT LED			
Power Dissipation	P _D	75	mW
Continuous Forward Current	I _F	50	mA
Peak Forward Current (Pulse Wide = 10μS , 300PPS)	I _{CP}	1	A
Reverse Voltage	V _R	5	V
OUTPUT PHOTOTRANSISTOR			
Power Dissipation	P _C	100	mW
Collector-Emitter Voltage	V _{CEO}	30	V
Emitter-Collector Voltage	V _{ECO}	5	V
Collector Current	I _C	20	mA
Operating Temperature Range	T _{opr}	-25°C to + 85°C	
Storage Temperature Range	T _{stg}	-40°C to + 100°C	
Lead Soldering Temperature [1.6mm (.063") Form Case]	T _{sol}	260°C for 5 Seconds	

ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

PARAMETER		SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
INPUT LED							
Forward Voltage		V_F		1.2	1.6	V	$I_F = 20\text{mA}$
Reverse Current		I_R			100	μA	$V_R=5\text{V}$
OUTPUT PHOTOTRANSISTOR							
Collector-Emitter Dark Current		I_{CEO}			100	nA	$V_{CE}=10\text{V}$
COUPLER							
Collector-Emitter Saturation Voltage	Parameter A	$V_{CE(SAT)}$				V	$I_C=0.25\text{mA}, I_F=20\text{mA}$
	Parameter B				0.4		$I_C=0.5\text{mA}, I_F=20\text{mA}$
	Parameter C						$I_C=0.9\text{mA}, I_F=20\text{mA}$
On State Collector Current	Parameter A	$I_{C(ON)}$	0.5			mA	$V_{CE}=5\text{V}, I_F=20\text{mA}$
	Parameter B		1.0				
	Parameter C		1.8				
Response Time	Rise Time	tr		3	15	μS	$V_{CE}=5\text{V}, I_C=2\text{mA}$ $R_L=100\ \Omega$
	Fall Time	tf		4	20		

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.1 Power Dissipation vs. Ambient Temperature

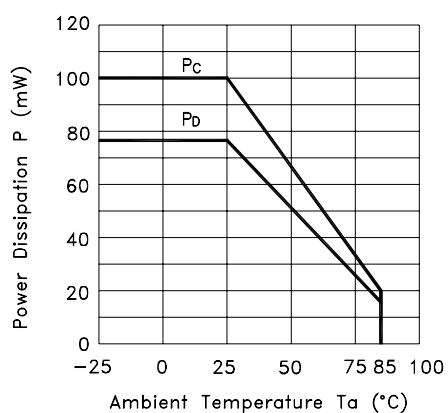


Fig.2 Forward Current vs. Forward Voltage

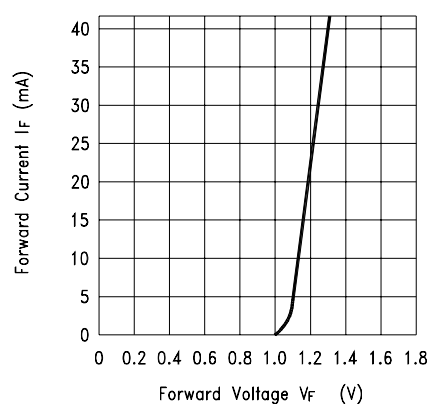


Fig.3 Collector Current vs. Collector-emitter Voltage

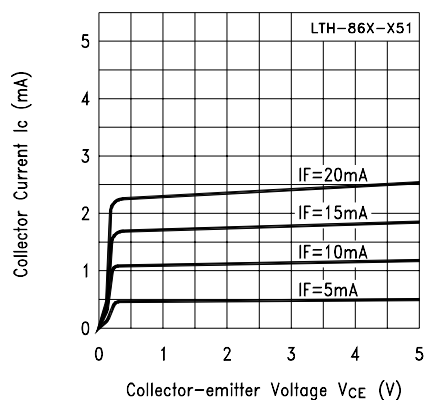
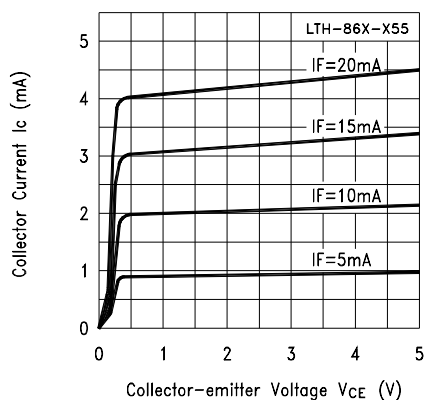


Fig.4 Collector Current vs. Collector-emitter Voltage



TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.5 Collector Current vs. Collector-emitter Voltage

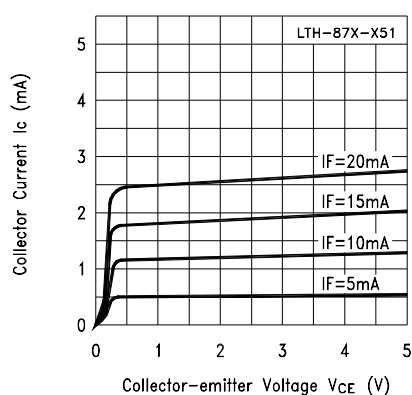


Fig.6 Collector Current vs. Collector-emitter Voltage

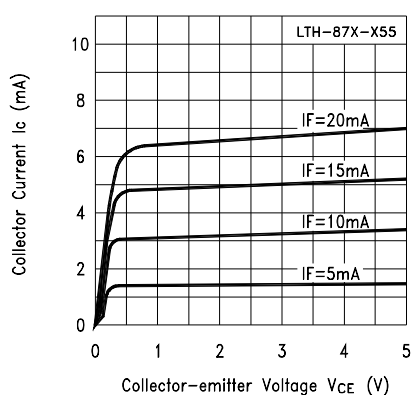


Fig.7 Collector Current vs. Ambient Temperature

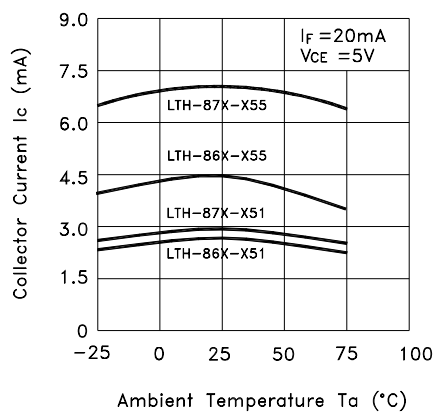
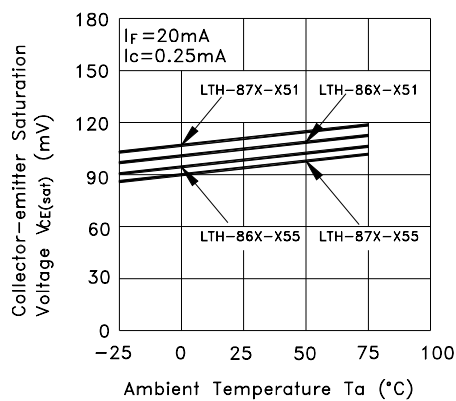


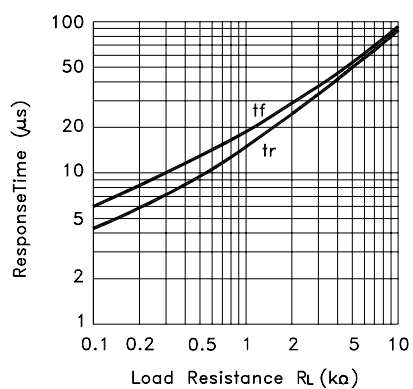
Fig.8 Collector-emitter Saturation Voltage vs. Ambient Temperature



TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.9 Response Time vs. Load Resistance



Test Circuit for Response Time

