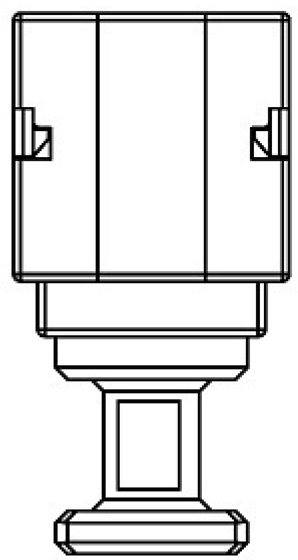
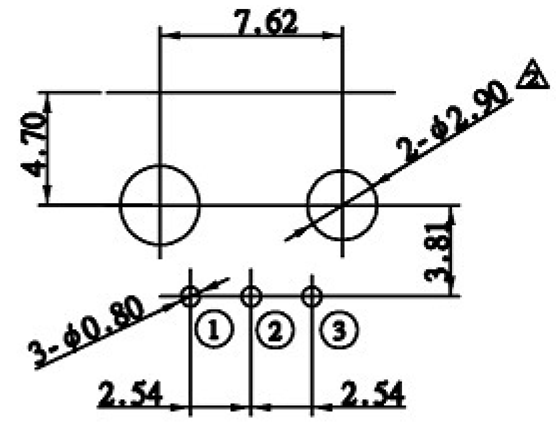
Cliff Electronic Components Ltd.
76 Holmethorpe Avenue, Holmethorpe Industrial Estate,
Redhill, Surrey, RH1 2PF, England, UK
Tel: 01737-771375 Fax: 01737-766012 Website: www.cliffuk.co.uk

FC6842032T
OPTICAL TRANSMITTER JACK OTJ-3

D-045

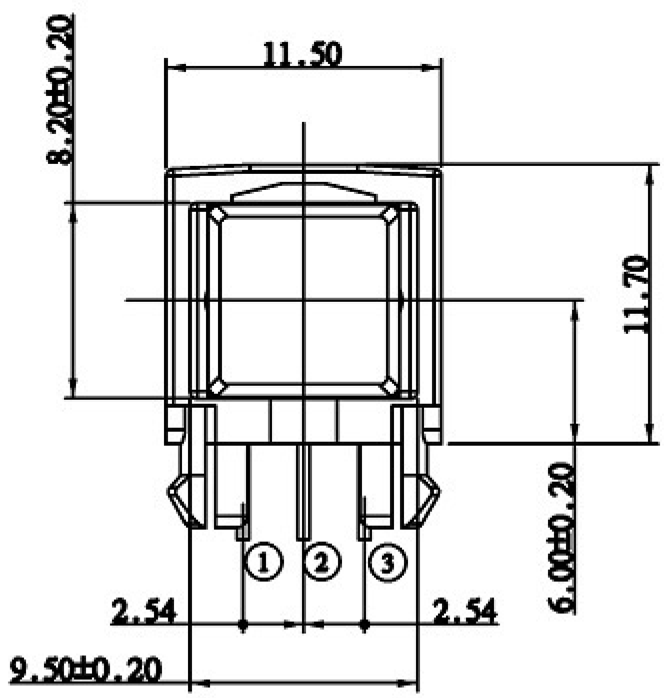
HISTORY X COUNT	DATE	ECN NO.	REV.	REVISION	SIGN.
	'02.05.29	N025048		[illegible]	[illegible]
⚠1	'03.04.28	N034026		[illegible]	[illegible]
⚠2	'04.04.20	N044017		PCB孔位尺寸修改	[illegible]
⚠3 X1	Jun.13.'06	N066020	1.1	Add series product	[illegible]
⚠4 X1	Nov.16.'06	N06B017	1.2	Redrawing and change cover material	[illegible]

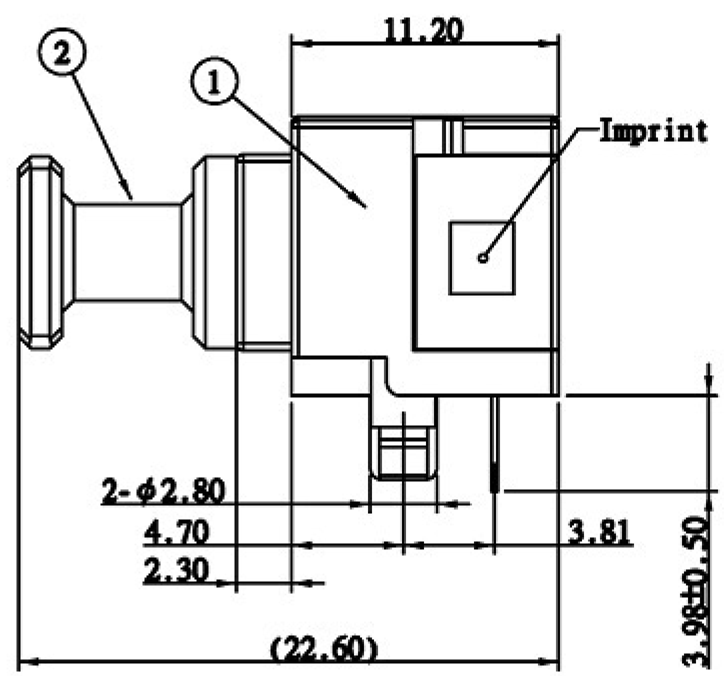


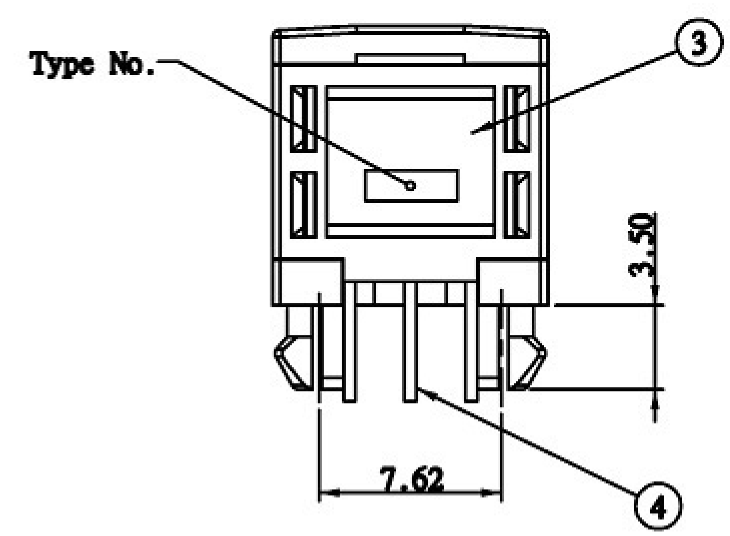


BOTTOM VIEW
Tol.±0.1

	TRANSMITTER
①	Vin
②	Vcc
③	GND







4	IC		1			TABLE A
3	BACK COVER		1	PC	BLACK	UL 94HB
⚠4 2	COVER		1	PC	BLACK	UL 94HB
1	BODY		1	PBT	BLACK	UL 94V-0
NO	PART NAME	PART NO.	Q'TY	MATERIAL	COLOR	REMARK

NOTICE	PLATED/COLOR	ANGLE TOL.	SCALE 3.000	RoHS Complied	SIZE A3
	THICKNESS	TOLERANCE ±0.3	UNIT mm	SPECIFICATION	
	MATERIAL	ANGLE 3rd	ORIGINAL DATE Jun.13.'06	PART NAME Optical Connector	REV. 1.2
	DESIGNED / DRAWN 劉 95.11.16 銘宋	CHECKED 游 95.11.17 大成	APPROVED 游 95.11.17 大成	PART NUMBER FC6842032T / DWG. NO	SHEET 1/1

發行單位: JT品管 | JTC | JTM | JTS | JTW

SPECIFICATIONS

CUSTOMER MODEL NO. / TITLE OPTICAL TRANSMITTER JACK	SPECIFICATION NO. FC6842032T	PAGE： 1 OF 5 DATE： NOV,11,2002

OPTICAL CONNECTOR

1. Features

(1) Uni-directional data transmission using plastic fiber.

(2) Signal transmission speed: MAX. 12.5Mbps

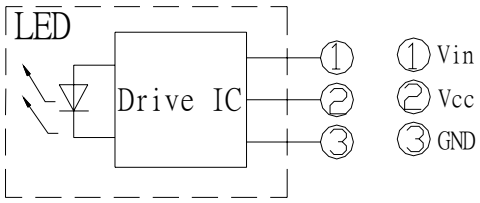
(3) Low voltage drive

Operating voltage: 2.75 to 5.25V

(4) Minimum input optical power: MIN. –21dBm (EIAJ)

(5) TTL and high speed C-MOS LOGIC IC compatible.

Internal equivalent circuit



2. Applications

(1) CD players

(2) MD players

(3) DVD players

3. Absolute Maximum Ratings

(Ta=25℃)

Parameter	Symbol	Rating		Unit
Supply voltage	Vcc	-0.5 to +7.0		V
Input voltage	Vin	-0.5 to Vcc +0.5		V
Operating temperature	Topr	-20 to +70		℃
Storage temperature	Tstg	-30 to +80		℃
Soldering temperature	Tsol	Solder Pool	260 ±3℃ 5s +1s -0s	
		Soldering Iron	380 ±10℃ 3s +1s -0s	

REV.	NAME	DATE	REMARK	APVD	CHKD	CHKD	WRTN
				許 91.11.11 石坪	陳 91.11.11 榮鴻	鄭 91.11.11 鈺龍	胡 91.11.11 文真

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SPECIFICATIONS

4. Recommended Operating Conditions

Parameter	Symbol	MIN.	TYP.	MAX.	Unit
Operating supply voltage	Vcc	2.75	3.0	5.25	V
Operating transfer rate	T	-	-	12.5	Mbps

5. Electro-optical Characteristics

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit.
Peak emission wavelength	λp		630	660	690	nm
Optical power output coupling with fiber	Pc	Refer to Fig.1	-21	-18	-15	dBm
Dissipation current	Icc	Refer to Fig.2	-	8	13	mA
High level input voltage	V_{iH}	Refer to Fig.2	2.1	-	-	V
Low level input voltage	V_{iL}	Refer to Fig.2	-	-	0.8	V
Low → High delay time	t_{pLH}	Refer to Fig.3	-	-	180	ns
High → Low delay time	t_{pHL}	Refer to Fig.3	-	-	180	ns
Pulse width distortion	Δtw	Refer to Fig.3	-15	-	+15	ns
Jitter	Δtj	Refer to Fig.3	-	1	15	ns

6. Mechanical Characteristics

6-1.

Parameter	Symbol	MIN.	TYP.	MAX.	Unit
Insertion force. Withdrawal force.	-	6	-	40	N

6-2. Strength of tapping part

The tapping part shall be capable of a torque of 8kgf-cm for 5 seconds by TP3 ×8 tapping tight screw and panel (t=0.8), the jack shall not be broken.

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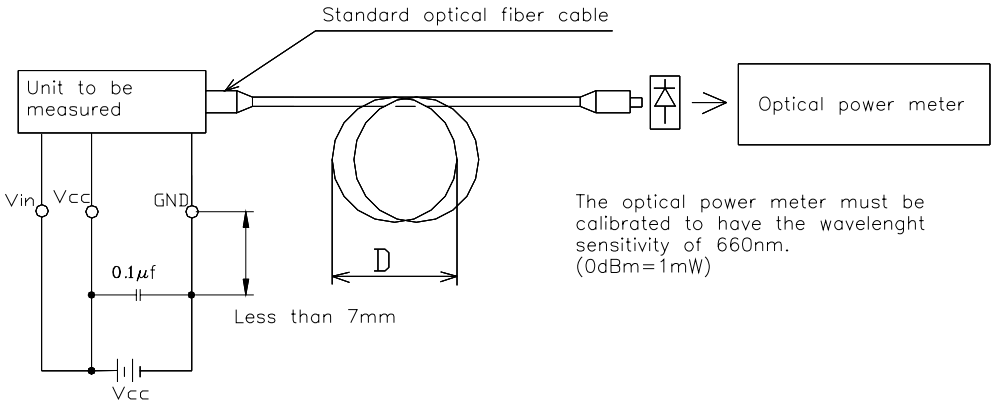
SPECIFICATIONS

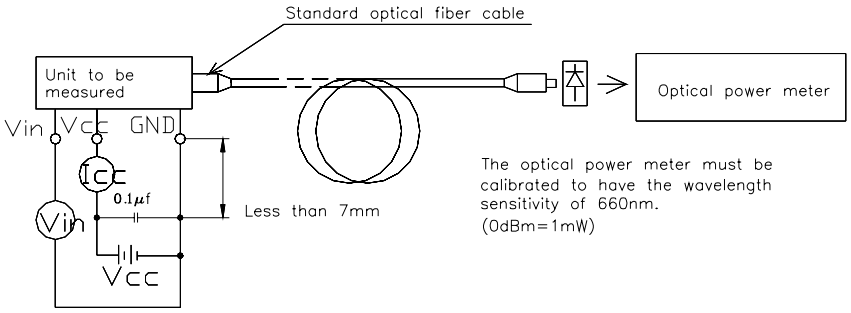
CUSTOMER MODEL NO. / TITLE	SPECIFICATION NO.	PAGE : 3 OF 5
OPTICAL TRANSMITTER JACK	FC6842032T	DATE : NOV,11,2002

Fig.1 Measuring Method of Optical Output Coupling with Fiber.



Notes: (1) OC-08 Vcc=3.0V (State of operating).
(2) To bundle up the standard fiber optic cable, make it into a loop with the diameter D=10cm or more. (The standard fiber optic cable will be specified elsewhere.)

Fig.2 Measuring Method of Input Voltage and Supply Current.



Input conditions and judgement method.

Condition	Judgement method
V_{in}=2.1V or more.	-21≦Pc≦-15dBm, Icc=13mA or less.
V_{in}=0.8V or less.	Pc≦-36dBm, Icc=13mA or less.

Note) Vcc=3.0V (State of operating).

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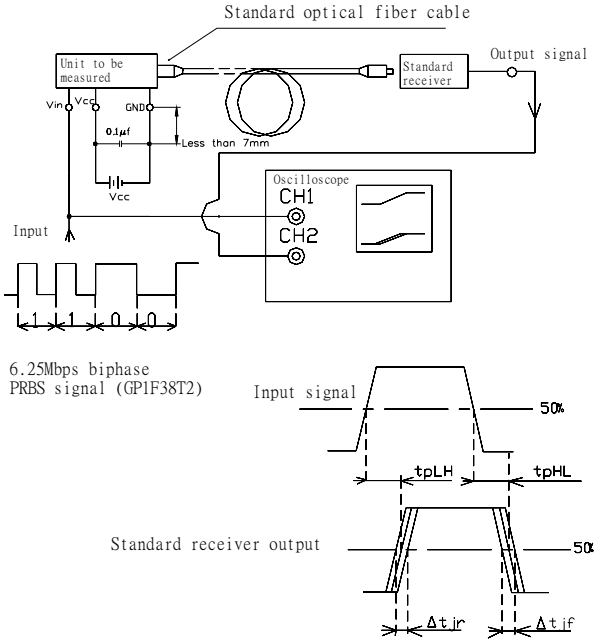
SPECIFICATIONS

CUSTOMER MODEL NO. / TITLE	SPECIFICATION NO.	PAGE： 4 OF 5
OPTICAL TRANSMITTER JACK	FC6842032T	DATE： NOV,11,2002

Fig.3 Measuring Method of Pulse Response and Jitter.



Test item

Test item	Symbol	Test condition
Low → High pulse delay time	t_{PLH}	Refer o the above prescriptions
High → Low pulse delay time	t_{PHL}	Refer to the above prescriptions
Pulse width distortion	Δtw	$\Delta tw=t_{PHL}-t_{PLH}$
Low → High Jitter	Δtjr	Set the trigger on the rise of input signal to measure the jitter of the rise of output
High → Low Jitter	Δtjf	Set the trigger on the fall of input signal to measure the jitter of the rise of output

Notes(1) The waveform write time shall be 4 seconds. But do not allow the waveform to be distorted by increasing the brightness too much.
(2) Vcc=3.0V (State of operating)
(3) The probe for the oscilloscope must be more than 1MΩ and less than 10pF.

REV.	NAME	DATE	REMARK	APVD	CHKD	CHKD	WRTN
				許 91.11.11 石坪	陳 91.11.11 榮鴻	鄭 91.11.11 鈺龍	胡 91.11.11 文真

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SPECIFICATIONS

CUSTOMER MODEL NO. / TITLE	SPECIFICATION NO.	PAGE： 5 OF 5
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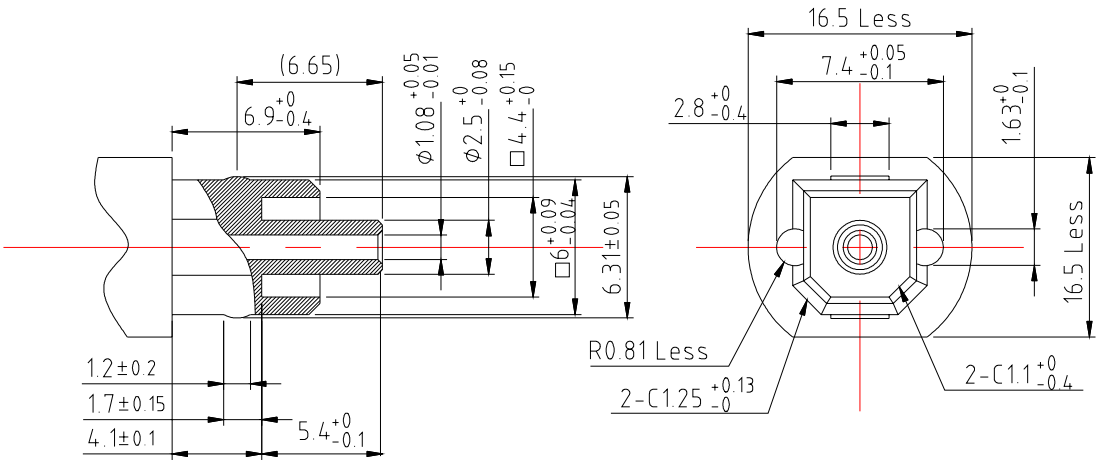
Mating plug



Unit:mm

REV.	NAME	DATE	REMARK	APVD	CHKD	CHKD	WRTN
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Document No.	Document name	Rev.	DATE
01-E	Management standards for "Environment-related substances to be controlled"	1.8	PAGE : 1 OF 2 DATE : APR,20,2009

1. This part should not contain any substances which are specified in follow .(Except cadmium is less than 5ppm, Lead is under 90ppm)

2. In this case, pre-processing methods and measurement methods shall conform to ROHS.

3. List of "Environment-related Substances to be Controlled ('The Controlled Substances')"

Substances		Allowable concentration
Heavy metals	Cadmium and cadmium compounds	Less 5ppm
	Lead and lead compounds	Less 90ppm
	Lead in the plastic,rubber,paints,ink	Less 50ppm
	Mercury and mercury compounds	
	Hexavalent chromium compounds	
	Nickel and Nickel compounds (at present only ASUS and Silitek)	
Chlorinated organic compounds	Polychlorinated biphenyls (PCB)	
	Polychlorinated naphthalenes (PCN)	
	Short-chain chlorinated paraffins (SCCP)	
	Polychlorinated terphenyls (PCT)	
	Other chlorinated organic compounds	
Brominated organic compounds	Polybrominated biphenyls (PBB)	
	Polybrominated diphenylethers (PBDE)(including decabromodiphenyl ether [DecaBDE])	
	Other brominated organic compounds	
Organic tin compounds (tributy tin compounds, Triphenyl tin compounds)		
Asbestos		
Specific azo compounds		
Formaldehyde		
Polyvinyl chloride (PVC) and PVC blends		
Foaming cushion material (EPS、EPE、EPP)		

				APVD	邱 2009.4.20 信榮	CHKD		CHKD	林 2009.4.20 美曲	WRTN	簡 2009.4.20 秀陵
REV.	NAME	DATE	REMARK								

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List of “Environment-related Substances to be Controlled (‘The Controlled Substances’)”

Substances
Beryllium oxide
Specific phthalates (DEHP、DBP、BBP、DINP、DIDP、DNOP、DNHP)
Hydrofluorocarbon (HFC)、Perfluorocarbon (PFC)
Phosphorus certificate
Perfluorooctane sulfonates (PFOS)
Specific benzotriazole
Cobalt dichloride
Ozone depleting substance (ODS)

4. Allowable concentrations:
   Less than 90ppm is determined as an allowable total-concentration of four heavy metals (mercury, cadmium, hexavalent chromium, and lead). Less than 5ppm is determined as an allowable cadmium-concentration in a plastic (including rubber) part.

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Component - Plastics **E130155**

NAN YA PLASTICS CORP PLASTICS 4TH DIV

3RD FL, 201 TUNG HWA NORTH RD, TAIPEI TW

1403G6

Polybutylene Terephthalate (PBT), furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	0.75	V-0	3	0	130	130	140
	1.5	V-0	2	0	130	130	140
	3.0	V-0	2	0	130	130	140

Comparative Tracking Index (CTI): **2**

Dimensional Stability (%): **0**

High-Voltage Arc Tracking Rate (HVTR): **1**

High Volt, Low Current Arc Resis (D495): **6**

Dielectric Strength (kV/mm): **33**

Volume Resistivity (10^x ohm-cm) : **14**

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1991-01-11
Last Revised: 2003-10-24

Underwriters Laboratories Inc®

IEC and ISO Test Methods

Test Name	Test Method	Units	Thickness Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.75	V-0 (ALL)
			1.5	V-0 (ALL)
			3.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m^2	-	-
ISO Izod Impact	ISO 180	kJ/m^2	-	-
ISO Charpy Impact	ISO 179-2	kJ/m^2	-	-

Underwriters Laboratories Inc®

Component - Plastics **E50075**

TEIJIN CHEMICALS LTD

KASUMIGASEKI COMMON GATE WEST TOWER, 2-1, KASUMIGASEKI 3-CHOME, CHIYODA-KU
TOKYO 100-8585 JP

L-1250(##)(f2)

Polycarbonate (PC), "Panlite", furnished as pellets, powder

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	0.40	V-2	4	3	80	80	80
	0.84	V-2	4	3	80	80	80
	1.5	HB	4	0	125	115	125
	3.0	HB	1	0	125	115	125
	6.0	HB	1	0	125	115	125

Comparative Tracking Index (CTI): **2**
Dimensional Stability (%): **0**
High-Voltage Arc Tracking Rate (HVTR): **4**
High Volt, Low Current Arc Resis (D495): **5**
Dielectric Strength (kV/mm): **24**
Volume Resistivity (10^X ohm-cm) : **16**

(##) - May be suffixed with one or two letters except for a single letter U, V or Z or the letters U, V or Z followed by another letter.

(f2) - Subjected to one or more of the following tests: Ultraviolet Light, Water Exposure or Immersion in accordance with UL 746C, where the acceptability for outdoor use is to be determined by UL.

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Report Date: 1990-09-24
Last Revised: 2007-03-15

Underwriters Laboratories Inc®

IEC and ISO Test Methods

Test Name	Test Method	Units	Thickness Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.40	V-2 (ALL)
			0.84	V-2 (ALL)
			1.5	HB75 (ALL)
			3.0	HB40 (ALL)
			6.0	HB40 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m^2	-	-
ISO Izod Impact	ISO 180	kJ/m^2	-	-
ISO Charpy Impact	ISO 179-2	kJ/m^2	-	-

Underwriters Laboratories Inc®

Component - Plastics **E50075**

TEIJIN CHEMICALS LTD

KASUMIGASEKI COMMON GATE WEST TOWER, 2-1, KASUMIGASEKI 3-CHOME, CHIYODA-KU
TOKYO 100-8585 JP

L-1225(###)(f2)

Polycarbonate (PC), "Panlite", furnished as pellets, powder

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	0.40	V-2	4	3	80	80	80
	0.75	V-2	3	1	80	80	80
	1.5	V-2	3	1	125	115	125
	1.9	HB	3	1	125	115	125
	3.0	HB	2	1	125	115	125
	6.0	HB	1	1	125	115	125

Comparative Tracking Index (CTI): **2**
Dimensional Stability (%): **0**
High-Voltage Arc Tracking Rate (HVTR): **4**
High Volt, Low Current Arc Resis (D495): **5**
Dielectric Strength (kV/mm): **30**
Volume Resistivity (10^x ohm-cm) : **16**

(###) - May be suffixed with one or two letters except LL, LM, ZL, JM, or ZE, or for single letter U, V or Z or the letters U, V or Z followed by another letter.

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Report Date: 1989-02-10
Last Revised: 2007-03-15

Underwriters Laboratories Inc®

IEC and ISO Test Methods

Test Name	Test Method	Units	Thickness Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.40	V-2 (ALL)
			0.75	V-2 (ALL)
			1.5	V-2 (ALL)
			1.9	HB75 (ALL)
			3.0	HB40 (ALL)
			6.0	HB40 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m^2	-	-
ISO Izod Impact	ISO 180	kJ/m^2	-	-
ISO Charpy Impact	ISO 179-2	kJ/m^2	-	-

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