

-TLP1207A(C2)

(TLP1207A(C2))

TIMING SENSOR, PAPER DETECTOR FOR COPIER,
FACSIMILE, ELECTRONIC PRINTER

TIMING DETECTOR FOR FA EQUIPMENT

VARIOUS POSITION DETECTION SENSOR

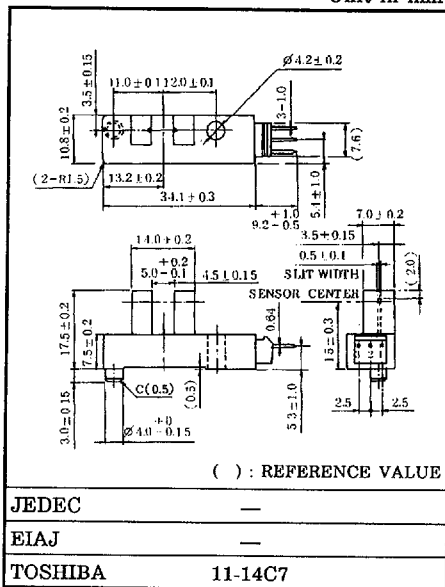
The TLP1207A (C2) is a digital output photo interrupter with a connector using an infrared LED at the emitter side and a photo IC at the detector side. When detecting a substance, the output becomes low level.

- One side mounting type
- Supply voltage : 5V
- Digital output (Open collector)
- Detection gap : 5mm
- Detecting accuracy : 0.5mm
- Low current consumption : $I_{CC} = 17.5\text{mA}$ (MAX.)
- UL recognized PWB adopted : 94V-0
- Material of the case : Polycarbonate
- Connector
B3P-SHF-1AA (Japan Solderless Terminal MFG.
made NH connector)

MAXIMUM RATINGS (T_a = 25°C)

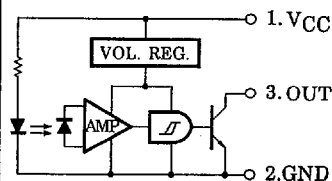
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	6	V
Output Voltage	V _O	28	V
Low Level Output Current	I _{OL}	50	mA
Low Level Output Current Derating (T _a > 25°C)	ΔI _{OL} /°C	−0.67	mA/°C
Operating Temperature Range	T _{opr}	−25~75	°C
Storage Temperature Range	T _{stg}	−40~85	°C

Unit in mm



Weight : 2.55g (TYP.)

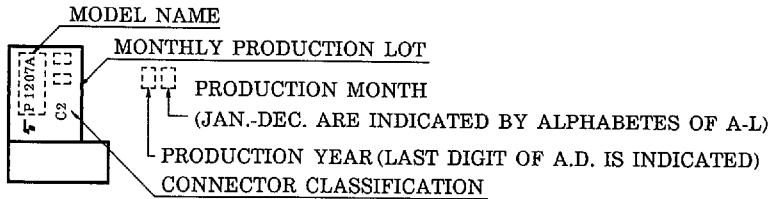
PIN CONNECTION



TLP1207A(C2)

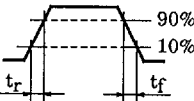
(TLP1207A(C2))

PRODUCT INDICATION



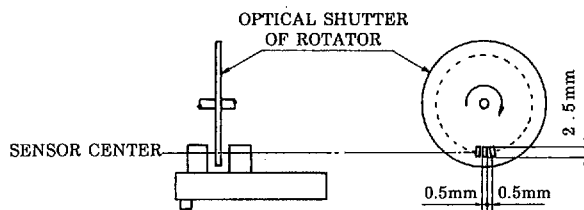
STAMP COLOR : SILVER

ELECTRICAL CHARACTERISTICS (Unless Otherwise Specified, $T_a = -25 \sim 75^\circ\text{C}$, $V_{CC} = 5 \pm 0.5\text{V}$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage		V _{CC}	—	4.5	5.0	5.5	V
Supply Current	High Level	I _{CCH}	Without Shutter	—	—	17.5	mA
	Low Level	I _{CCL}	Shutter In	—	—	17.5	
Output Voltage	High Level	V _{OH}	Without Shutter, R _L =47kΩ	V _{CC} ×0.9	—	—	V
	Low Level	V _{OL}	Shutter In, I _{OL} =16mA, Ta=25°C	—	0.07	0.35	
			Shutter In, I _{OL} =16mA	—	—	0.4	
Peak Emission Wavelength		λ _p	Ta=25°C, LED Side	—	940	—	nm
Peak Sensitivity Wavelength		λ _p	Ta=25°C, Photo IC Side	—	900	—	nm
Response Frequency		f	R _L =47kΩ, Ta=25°C (Note)	3000	—	—	Hz
Rise Time	t _r		—	8	—	μs	
Fall Time	t _f		—	0.03	—		

(Note) Response frequency is a value measured when the disc shown in the following figure was rotated. No DC current should be output.

(TLP1207A(C2))



PRECAUTION

Please be careful of the followings.

1. During 100 μ s after turning on V_{CC}, output voltage changes for stabilizing the inner circuit.
2. When installing, avoid to work by holding the connector by hand. Always, install by holding the main body of the element while assuring the mounting board is not warped or twisted. The connectors shall be inserted or pulled out at normal temperature.
3. Screw shall be tightened to clamping torque of 0.59N·m.
4. The container is made of polycarbonate. Polycarbonate is usually stable with acid, alcohol, and aliphatic hydrocarbons however, with peroxochemicals (such as benzene, toluene, and acetone), alkali, aromatic hydrocarbons, or chloric hydrocarbons, polycarbonate becomes cracked, swollen, or melted. Please take care when choosing a packaging material by referencing the table below.

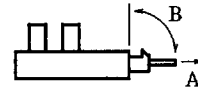
<Chemicals to avoid with polycarbonate>

	PHENOMENON	CHEMICALS
A	Little deterioration but staining	• nitric acid (low concentration), hydrogen peroxide, chlorine
B	Cracked, crazed, or swollen	• acetic acid (70% or more) • gasoline • methyl ethyl ketone, ethyl acetate, butyl acetate • ethyl methacrylate, ethyl ether, MEK • acetone, m-amino alcohol, carbon tetrachloride • carbon disulfide, trichloroethylene, cresol • thinners, oil of turpentine • triethanolamine, TCP, TBP
C	Melted { } : Used as solvent.	• concentrated sulfuric acid • benzene • styrene, acrylonitrile, vinyl acetate • ethylenediamine, diethylenediamine • {chloroform, methyl chloride, tetrachloromethane, dioxane, 1, 2-dichloroethane}
D	Decomposed	• ammonia water • other alkali

(TLP1207A(C2))

TERMINAL STRENGTH (Ta = 25°C)

CHARACTERISTIC	TEST CONDITION		LIMIT
PULL	DIRECTION	A	NO DEFECT OF ELECTRICAL CHARACTERISTICS
	WEIGHT	19.6N	
	TIME	5s / ONCE	
BEND	DIRECTION	B	
	WEIGHT	9.8N	
	TIME	5s / THRICE	



RECOMMENDABLE MATCHED CONNECTOR

Japan solderless terminal MFG. made NH connector

HOUSING	H3P-SHF-AA			
TERMINAL	AWG SIZE	PRODUCT FORM	MATERIAL	TYPE No.
	AWG22~26	LOOSEN	BRASS	SHF-001T-0.8SS
			PHOSPHOR BRONZE	SHF-001T-0.8BS
	AWG28~30		BRASS	SHF-002T-0.8SS
			PHOSPHOR BRONZE	SHF-002T-0.8BS

For details of the connectors, please refer to the maker.

(TLP1207A(C2))

