

KI1390,1391

Dimension (Unit:mm)

Description

Model **KI1390/1391** are compact size of Photo Interrupter and consist of an Infra Red LED and a Photo IC.

Feature

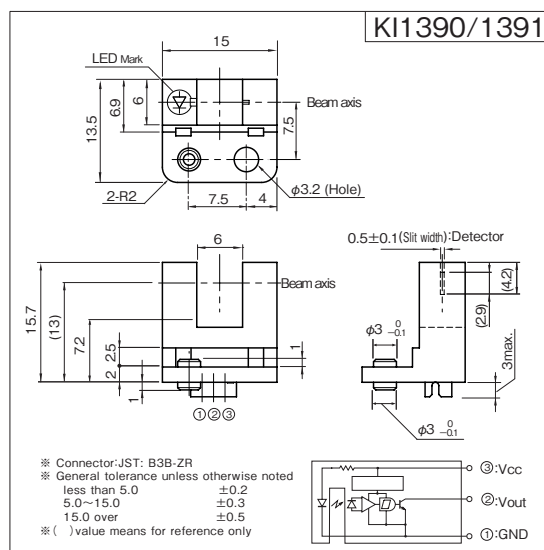
- Built-in amplifier, Open collector output type.
- Built in resistor for LED drive.
- The other model;
Pull-up Resistor output type ... **KI1393, KI1394**

Application

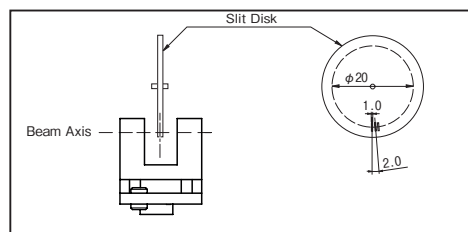
- Object passing for Card reader, Bill exchanger.
- Coin-passing for Auto vending machine and Amusement.
- Object passing in Auto vender and Ticket vending machine.
- Paper detection for O.A. equipment.

Absolute Maximum Ratings
[Ta=25°C Unless otherwise noted]

Item	Symbol	Rating	Units
Supply Voltage	V _{CC}	6	V
Low Level Output Current	I _{OL}	50	mA
Output Voltage	V _O	28	V
Operating Temperature	T _{opr}	-20 ~ +75	°C
Storage Temperature	T _{stg}	-40 ~ +80	°C



Model	Operating mode
KI1390	at Beam detecting High
KI1391	at Beam detecting Low



Note: Each value shown at rotating of slit disk.
Don't output as DC.

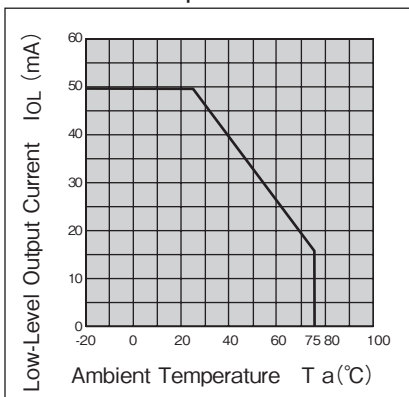
Electro-Optical Characteristics [V_{CC}=5V, Ta=25°C Unless otherwise noted]

Item	Symbol	Condition	min.	typ.	max.	Units
Supply Voltage	V _{CC}		4.5	5.0	5.5	V
Low Level Supply Current	I _{CC}	KI1390 at Light block by object	—	—	25	mA
		KI1391 at Beam detecting	—	—	25	
High Level Supply Current	I _{CC}	KI1390 at Beam detecting	—	—	25	mA
		KI1391 at Light block by object	—	—	25	
Low Level Output Voltage	V _{OL}	KI1390 at Light block by object, I _{OL} =16mA	—	—	0.4	V
		KI1391 at Beam detecting, I _{OL} =16mA	—	—	0.4	
High Level Output Voltage	V _{OH}	KI1390 at Beam detecting, R _L =47k Ω	V _{CC} × 0.9	—	—	V
		KI1391 at Light block by object, R _L =47k Ω	V _{CC} × 0.9	—	—	
Frequency	f		3000	—	—	Hz
Response Time	Rise		—	1.47	—	μ sec
	Fall		—	0.02	—	

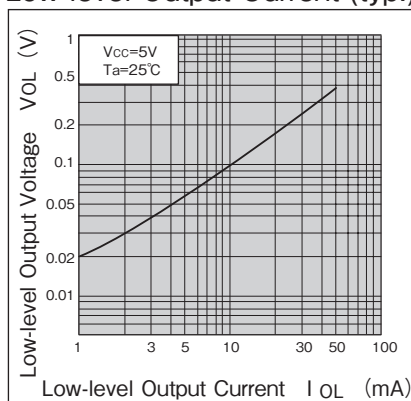
KI1390/1391

Note: Operation never exceeds each value of Absolute Maximum Ratings.

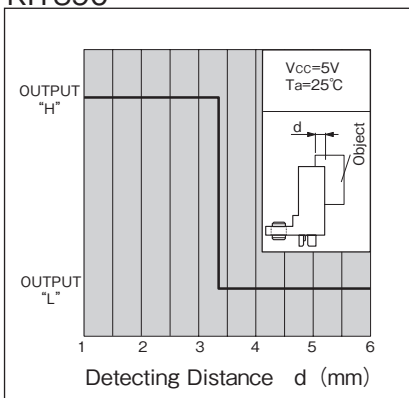
Low-level Output Current vs. Ambient Temperature



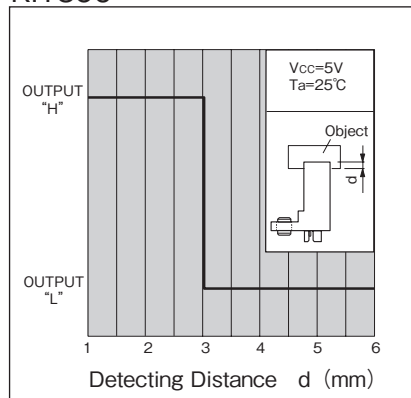
Low-level Output Voltage vs. Low-level Output Current (typ.)



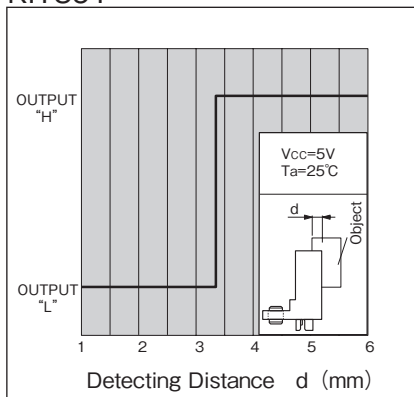
Detecting Position vs. Relative Light Current 1 (typ.)
KI1390



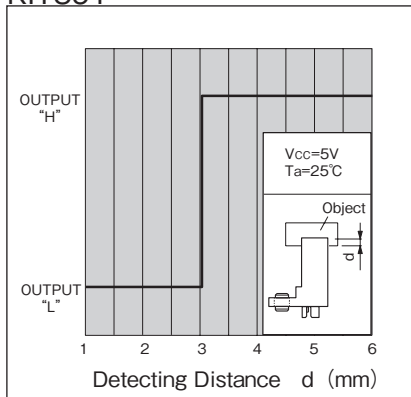
Detecting Position vs. Relative Light Current 2 (typ.)
KI1390



Detecting Position vs. Relative Light Current 1 (typ.)
KI1391



Detecting Position vs. Relative Light Current 2 (typ.)
KI1391



- A Custom designed package is available on request.
- Specification are subject to change without notice.

04.09-1A