

KOI-6713B

Features

- Compliant to IrDA 1.4 Low Power Standard
- Operating Voltage : 2.4 ~ 3.6V
- Compact Package Integrated Transmitter and Receiver (7.0L x 2.70W x 1.3T)
- Complete Power Down Mode for the Current Consumption.
- LED Stuck-high Protection
- Lead-free & High reliability package

Remote Control Features

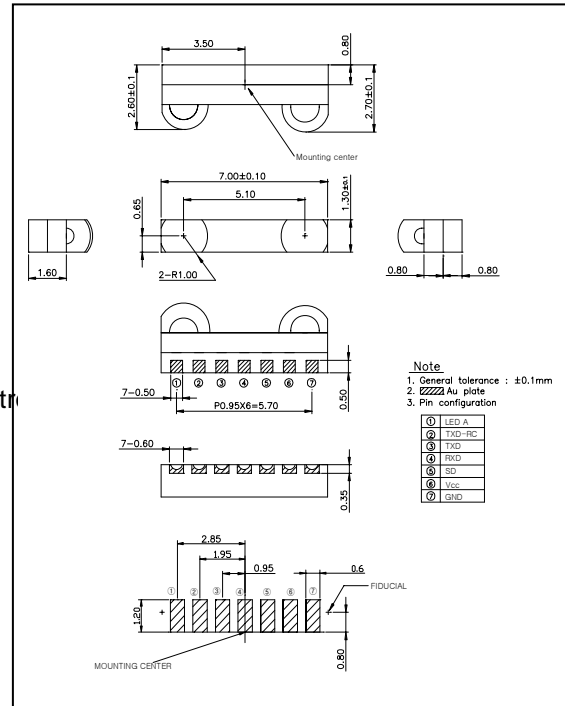
- Wide Beam angle and high radiant intensity for remote control
- Typical link distance up to 8m

Applications

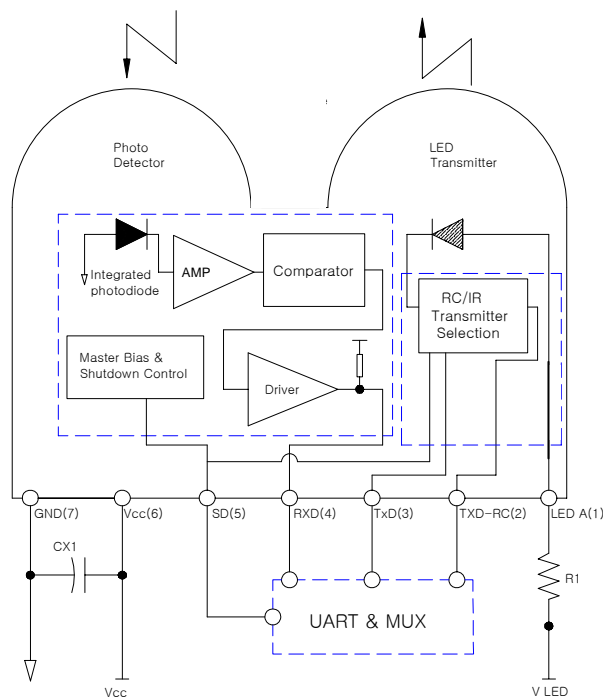
- Cellular Phone
- Personal Computer(Desk-top PC, Lap-top PC)
- Printers, Vending Machine, ATM
- Personal Digital Assistants.(PDA)

Dimensions

(Unit : mm)



Block Diagram



KOI-6713B

Absolute Maximum Ratings

[Ta = 25 °C]

Parameter	Symbol	Conditions	Min.	Max.	Unit
Supply Voltage	V _{CC}	-	0	7.0	V
LED Supply Voltage	V _{LED}	-	0	7.0	V
Operating Temperature	T _{opr.}	-	-25	85	°C
Storage Temperature	T _{stg.}	-	-40	100	°C
DC LED Transmit Current	I _{LED} (DC)	-	-	50	mA
Peak LED Transmit Current	I _{LED} (PK)	<90μs pulse width, <20% duty cycle	-	200	mA
Peak LED Transmit Current	I _{LED} (PK)	Remote control Mode	-	300	mA
Receiver Data Output Voltage	V _{RxD}	-	-0.5	V _{CC} +0.5	V
Transmitter Data Input Voltage	V _{TxD}	-	-0.5	V _{CC} +0.5	V

4. Electro-Optical Characteristics

[Ta=25 °C, V_{CC}=3.3V]

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Supply Current	I _{CC1}	Shutdown	-	0.001	0.5	μA	
	I _{CC2}	Idle	-	140	200	μA	
Transmitter	T _{XD} Hold Time		25	-	-	μs	
	T _{XD} Setup Time		25	-	-	μs	
	T _{XD} Pulse Width		25	-	-	μs	
	Shutdown Pulse Width		25	-	-	μs	
	T _{XD} Wakeup Time	T _{tw}		-	15	20	μs
	Viewing Angle	2θ _{1/2}	-	30	-	60	deg.
	Data Output Pulse Width	T _{stpw}	tpw(RxD)=1.63μs at 115.2kbit/s	1.5	1.9	2.0	μs
	Rise Time	t _r	BR=115.2kbit/s	-	50	100	ns
	Fall Time	t _f		-	100	150	ns
	Peak Emission Wavelength	λ _p	-	-	875	-	nm
	Spectral Bandwidth	Δλ	-	-	45	-	nm
Receiver	Viewing Angle	2θ _{1/2}	-	30	-	60	deg.
	Peak Sensitivity Wavelength	λ _p	-	-	880	-	nm
	High Level Output Voltage	V _{OH}	I _{OH} =-200 μA	2/3 V _{CC}	-	V _{CC}	V
	Low Level Output Voltage	V _{OL}	I _{OL} =200 μA	-	-	1/3 V _{CC}	V
	Rx SIR Pulse Width	T _{srpw}	tpw(RxD)=1.63μs at 115.2kbit/s	1.4	2.2	4	μs
	Rise Time	t _r	BR=115.2kbit/s	-	50	100	ns
	Fall Time	t _f		-	50	100	ns
	Communication Distance	D		30	60	-	cm
	Receiver Latency Time	TL		-	60	200	μs
Receiver Wakeup Time	T _{rw}		-	50	100	μs	