

CND0201A

Optical Transmission Module for IrDA

Overview

CND0201A is a high speed response, high reliability infrared data link device. It consists of a high speed GaAlAs infrared light emitting diode, a high speed PIN photodiode and a post processing IC, and they are housed in a single package.

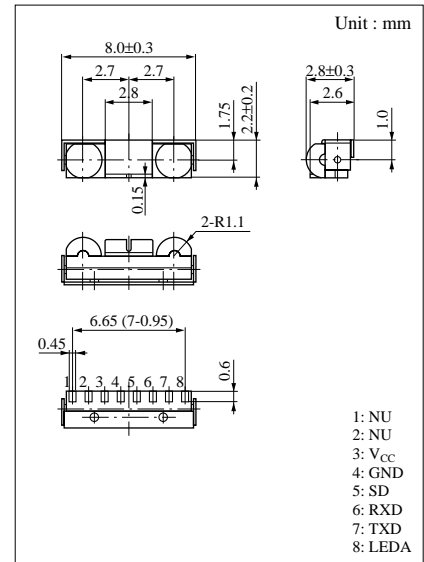
CND0201A is conformable to IrDA 1.2a Low Power Type

Features

- Conformable to IrDA 1.2a Low Power Type (max. 115.2 kbps)
- Small size package
- Receiver latency time (max. 0.1 ms)
- Conformable to SMD

Applications

- Cellular phone
- Peripheral devices for personal computers
- Digital still cameras



Absolute Maximum Ratings (T_a = 25°C)

	Parameter	Symbol	Ratings	Unit
Transmitter TX	LED Peak forward current	I _{FP} ^{*1}	100	mA
	Data input voltage	V _I	-0.5 to V _{CC} +0.5	V
Receiver RX	Supply voltage	V _{CC}	-0.5 to +7	V
	Output sinking current	I _{OL}	10	mA
	Data output voltage	V _O	-0.5 to V _{CC} +0.5	V
Temperature	Operating ambient temperature	T _{opr}	0 to +70	°C
	Storage temperature	T _{stg}	-20 to +85	°C

*1 Duty ratio ≤ 20%, pulse width ≤ 90 μs

■ Electro-Optical Characteristics (Ta = 25°C, V_{CC} = 3V)

Parameter		Symbol	Conditions	min	typ	max	Unit
Operating supply voltage		V _{CC}		2.7	3.0	3.6	V
Supply current (Receiver)		I _{CC}			0.4	0.5	mA
Supply current (shut down)		I _{CCSD}			10	200	nA
Data rates				2.4		115.2	kbps
Peak emission wavelength		λ _p		850	870	900	nm
TX	LED Peak current	I _{FP}			25		mA
	Radiant intensity	“H” Level	I _{CH}	3.6		28.8	mW/sr
		“L” Level	I _{CL}			0.3	μW/sr
	High level input voltage	V _{IH}		2.5		V _{CC}	V
	Low level input voltage	V _{IL}		0		0.5	V
	Half angle	α		15		30	deg.
	Rise time, fall time	t _r , t _f				600	ns
RX	Maximum transfer distance	“H” Level	L _{max}	20			cm
		“L” Level	L _{max}	30			cm
	High level output voltage	V _{OH}		V _{CC} - 0.5			V
	Low level output voltage	V _{OL}				0.5	V

■ Block Diagram

