

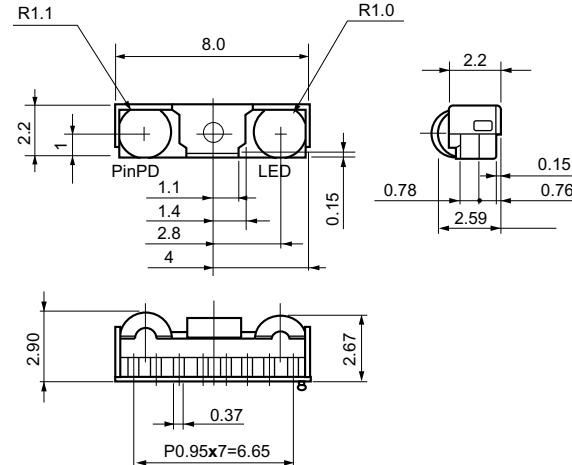
IrDA Infrared Communication Module

RPM882-H7

● Features

- Bilateral symmetrical and wide angle of optical characteristics both for IrDA and for RC mode.
- Typical 9m for Remote control
- IrDA Ver 1.2 Low Power(2.4kbps to 115.2kbps)
- Low voltage operation (Vcc=2.4 to 3.6V, Vio=1.5 to 3.6V)
- Flexible Application for Transfer input
Separate input / Common input

● External Dimensions (Unit:mm)



● Applications

- Mobile Phone, PDA etc.

● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Units
Supply Voltage	Vmax	7.0 *1	V
Input Voltage	Vin(4,5,6,7pin)	-0.3~VIO+0.3	V
Operation Temperature	Topr	-25~85	°C
Storage Temperature	Tstg	-30~100	°C
LED Peak Current	Ifp	300 *2	mA
Power Dissipation	Pd	300 *3	mW

*1 This applies to all pins basis ground pins(1pin)

*2 LED Peak Current:<90usec, On duty<50%

*3 When glass-epoxy board(70 x 70 x 1.6mm) mounted. In case operating environment is over 25°C, 4mW would be reduced per each 1°C stepping up.

● Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Units
Supply Voltage	VCC	2.4	3.0	3.6	V
Interface Supply Voltage	VIO	1.5	3.0	VCC	V
LED Supply Voltage	LEDVCC	2.6	3.0	5.5	V

● Electrical characteristics (VCC=VIO=3.0V, LEDVCC=3.0V, Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Units	Condition
Consumption Current 1	Icc1	—	80	104	μA	PWDOWN=0V, At no input light
Consumption Current 2	Icc2	—	0.01	0.2	μA	PWDOWN=VIO, At no input light
LED Anode Current(IrDA Mode)	ILEDIA1	28	40	52	mA	TXD=VIO, R1=4.7Ω, PWDOWN=0V
LED Anode Current(RC Mode)	ILEDIA2	150	200	245	mA	TX-RC=VIO, R1=4.7Ω, PWDOWN=0V
RXD Output Pulse Width	twRXD	1.5	2.3	4.2	μs	C _L =15pF, 2.4~115.2kbps

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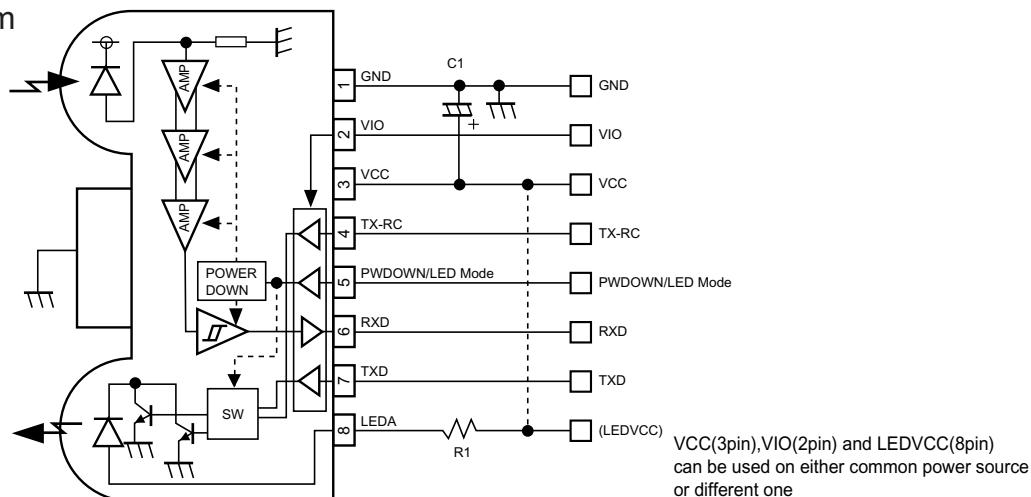
● Current specifications in effect of

Oct. 2003

● Optical Characteristics (VCC=VIO=3.0V, LEDVCC=3.0V, Ta=25°C)

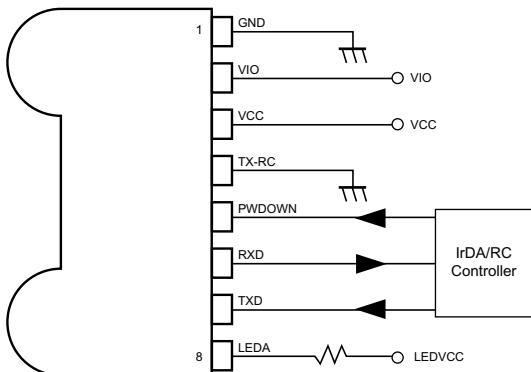
Parameter	Symbol	Min.	Typ.	Max.	Units	Condition
Peak Wave Length 1(IrDA Mode)	λ P1	880	890	892	nm	ILED=50mA,Duty20%
		850	-	900	nm	ILED=50mA,Duty20%, -20~60°C
Peak Wave Length 2(RC Mode)	λ P2	880	890	920	nm	ILED=200mA,Duty20%
Intensity 1(IrDA Mode)	IE1	4	13	28	mW/sr	-15deg \leq θ_L \leq 15deg, R1=4.7Ω
Intensity 1(RC Mode)	IE2	30	65	130	mW/sr	-15deg \leq θ_L \leq 15deg, R1=4.7Ω
Half-Angle	$\theta_L/2$	± 15	± 22	-	deg	
Minimum Irradiance in Angular	Eemin	-	3.6	6.8	μ W/cm ²	-15deg \leq θ_L \leq 15deg
Maximum Irradiance in Angular	Eemax	500	-	-	mW/cm ²	-15deg \leq θ_L \leq 15deg
INPUT Half-Angular	$\theta_D/2$	± 15	-	-	deg	
Maximum Emitting Time	TLEDmax	20.5	48	120	μs	TXD=0 \rightarrow VIO or TX-RC=0 \rightarrow VIO

● Block Diagram

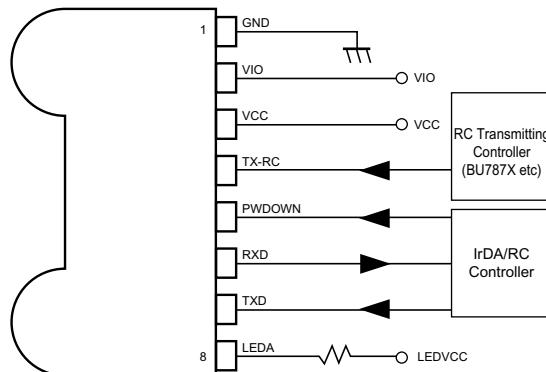


● Interface operating timing (Emitting Side)

(1) When TXD output for IrDA and TXD output for remote controller is 1 line



(2) When TXD output for IrDA and TXD output for remote controller are different lines



(2) RC transmitting mode at IDA receiver active condition

Input		Condition	
PWDOWN	TXD	LED Mode	Receiver Circuit
L	L	OFF	ON
L	---	IrDA	ON
H	L	OFF	OFF
H	---	RC	OFF

Input		Condition		
PWDOWN	TX-RC	TXD	LED Mode	Receiver Circuit
L	L	L	OFF	ON
L	---	---	IrDA	ON
H	---	L	RC	OFF
H	---	L	OFF	OFF

Contact us for further information about the products.

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