

General Description

YY-M420A is a high performance non-contact infrared temperature measurement module with long distance. The module has the characteristics of fast response and accurate temperature measurement. The standard 2-wire access mode makes it widely used in industrial, power and other applications requiring high temperature monitoring.

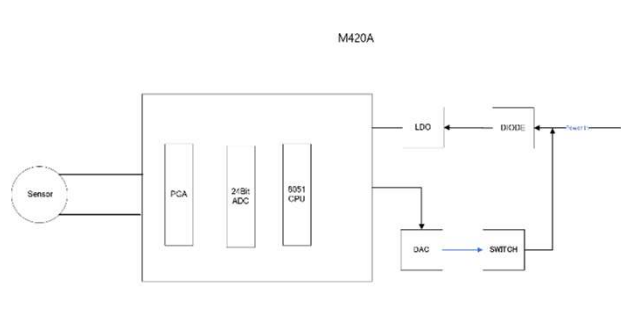
Features and Benefits

- Factory Pre-calibrated
- 2-Wire Standard(No positive or negative) + 3-Wire Additional(Communication Used)
- Detected Range 0-600°C Max
- DS Ratio 20:1 Equal Fov 4°
- Programmable Range Adjust From 100 °C To 600 °C (100 °C Stepping)
- Operating Temperature Range: -10°C To +50°C
- Human-Body Detected Up To 6M Long

Applications

- Steel Works
- Electrical Power
- Industry
- Flame monitoring

Block Diagram



Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{dd}	Supply voltage		12.0	24.0	28.0	V
I_d	Self Working current	VDD=24.0V	2.9	3.1	3.3	mA
FOV	Filed of view			4		°
B	Baud rate			2400		bps
I_o	Output current	VDD=24.0V	4	3.3	20	mA

Thermometer Sensing Characteristics

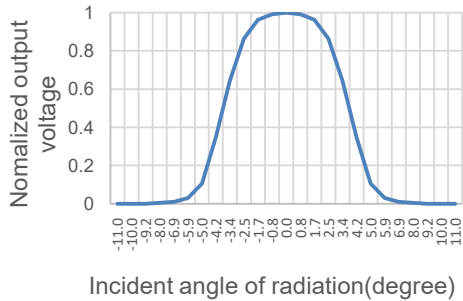
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
T_{amb_range}	Ambient reading range	VDD=24.0V	-20		85	°C
T_{amb_res}	Ambient resolution			0.1		°C
T_{obj_range}	Object temperature range	VDD=24.0V	0		600	°C
T_{obj_res}	Object resolution			0.1		°C

Others

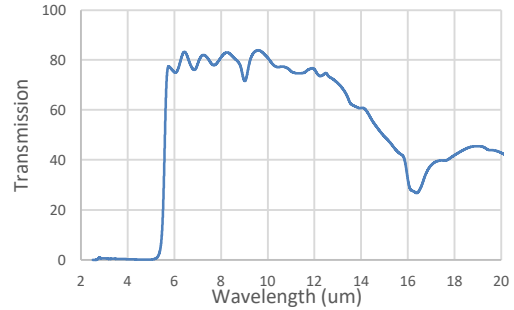
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
T_a	Response Time	VDD=24.0V	400	600	1000	ms
W_t	Weight		237	243	248	g

Optical Characteristics

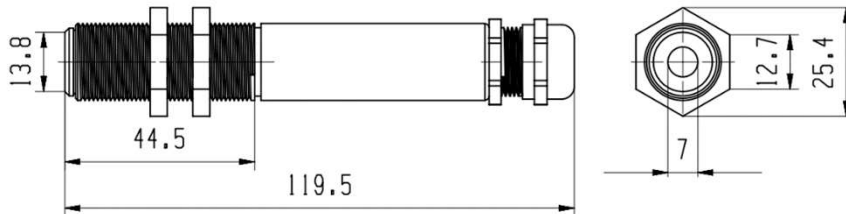
Optical characteristics



Filter parameters



Mechanical Drawings (Unit : mm)



Pin Definitions and Descriptions

Pin Name	Color.	Type	Description
Power	Red	Source	Power Connect
Power	Black	Source	Power Connect
TXD	Green	TTL-3.3V	Module UART Sending Data
RXD	White	TTL-3.3V	Module UART Receiving Data
GND	Yellow	Digital Ground	

Revision History

Revision Number	Release Date	Description
Rev1	2021/7/17	Initial Release