5.8G motion detection sensor module

1. Product Overview

The 5.8G motion detection sensor is a module which can be integrated in smart lamps. It uses doppler frequency shift effect to detect move object speed. It will send out trigger signal to lamp controller when sensor module detects object motion. Lamp will dim or switch on/off based on the trigger signal of sensormodule.

1.1 Features

The module has three blocks what are 5.8G transmitter, IF base band, digital process circuit. The transmitter provides a 5.8G continues wave source, most of energy of source will radiate into the application field by patch antenna. Some will be input of mixer, the received reflection from move object will mix with theoutput of local oscillator, then get IF signal, tiny IF signal will be amplitude as several hundred mV level, the amplified signal will input ADC of STM32L03, the MCU will do sampling and calculate the signal amplitude and frequency, when the motion signal meets the requirement of trigger, the MCU will send out a trigger signal to host.

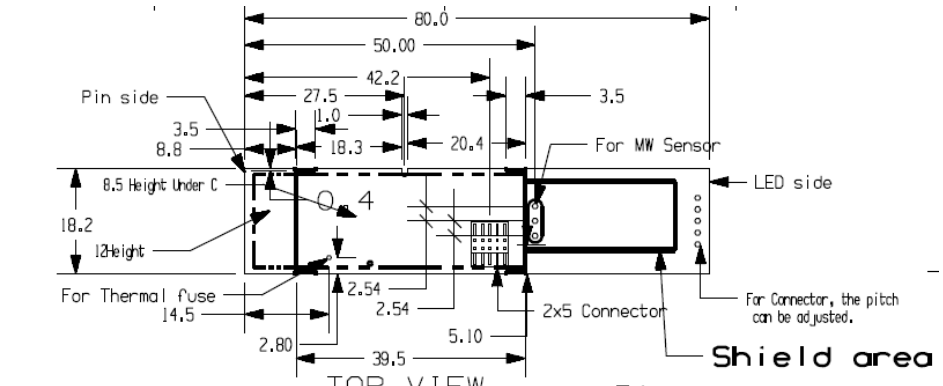
1.2 Main Application Fields

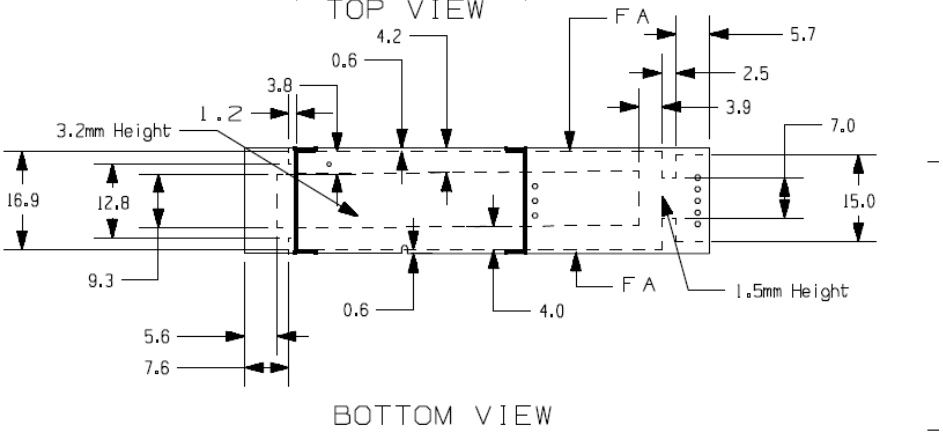
- Intelligent LED

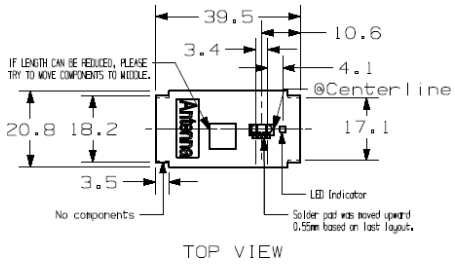
2. Dimensions and Footprint

2.1 Dimensions

Size: 18.2mm(W)*80mm(L).







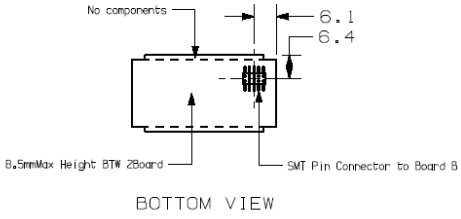


Figure 2 dimension of the 5.8G motion detection sensor

2.2 Pin Definition

Table 1 shows the general pin attributes of TYLC3

PIN NO.	Name	Type
1	DC_7V	Input
2	GND	input

3. Electrical Characteristics

Parameters	Description	Min.	Max.	Unit
VCC	Supplied voltage	6.5	7.5	V
Ta	Working temperature	-20	85	℃
I_op.	Operational current	28	32	mA
F_carrier	Carrier frequency	5.725	5.875	GHz

FCC & IC Note:

This device complies with part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence.L'exploitation est autorisée aux deux conditions suivantes:(1) l'appareil ne doit pas produire de brouillage, et(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, memesi le brouillage est susceptible d'en compromettre le fonctionnement.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause

harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Le rayonnement de la classe b repecte ISED fixaient un environnement non contrôlés.Installation et mise enoeuvre de ce matériel devrait avec échangeur distance minimale entre 20 cm ton corps.Lanceurs ou ne peuvent pas coexister cette antenne ou capteurs avec d'autres.

FCC & ISED Label Instructions
The outside of final products that contains this module device must display a label referring to the enclosed module.
This exterior label can use wording such as: "Contains Transmitter Module
FCC ID: 2AGBW324131296111X,IC:20812-6111X" or "Contains FCC ID: 2AGBW324131296111X,IC:20812-6111X" Any similar wording that expresses the same meaning may be used.

Instructions d'étiquette ISED
L'extérieur des produits finaux contenant ce module doit afficher une étiquette faisant référence au module joint.
Cette étiquette extérieure peut utiliser des termes tels que: "Contient le module émetteur
IC: 20812-6111X "ou" Contient IC: 20812-6111X "Tout libellé similaire qui exprime la même signification peut être utilisé.