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產品規格承認書

PRODUCTION SPECIFICATION FOR APPROVAL



USB2.0 DUAL 0.3M CAMERA

Model No. : DCSG3B-PR-DD0

Customer 客戶名稱	
Date Submitted 送樣日期	

Approve

確認回簽

Fangtec Corporation



Revision History

Date	Rev.	Contents
2024/07/06	V1.0	First release



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1. Preface

This documentation describes product specifications to ensure design to meet customer's requirements.

DCSG3B-PR-DD0 is an USB Video Class (UVC) compliant camera module with video feature, designed for portable notebook PC image applications. It is made up of the following components, CMOS sensor, lens, holder, backend, PCB, image processing circuit and connector, to come out a digital video device. It shall be a reliable device which is embedded in PC to transfer video data through USB interface to PC.

DCSG3B-PR-DD0 not only offers up to VGG resolution (640X480) for image applications to take still image, but also offers video stream for end user to preview/record motion image through USB 2.0 interface. And It can support VGA (300K, 640x480) resolution up to 20 fps at YUY2 mode, VGG resolution (640x480) up to 30fps at MJPG mode.

DCSG3B-PR-DD0 builds in AE, AWB and AGC for automatic image control supported by CMOS sensor. For image quality control, it also offers UVC standardized User Interface (UI) to let end user well tune image by property page.

2. Features

- 1/6.5" VGA RGB Camera Module
- 1/6.5" VGA IR Camera Module
- Max frame rate up to 30fps (MJPG Mode)
- Compliant USB 2.0 and USB Video Class
- Support still image capture and video streaming (RTSP)
- Automatic image control
 - ◆ Automatic Exposure Control (AEC)
 - ◆ Automatic White Balance (AWB)
 - ◆ Automatic Gain Control (AGC)
- Input Voltage: 5V
- Operate Temperature Range : -20°C~+70°C

3. Applications

- Security cameras
- 2D anti-counterfeiting
- Biometrics
- Face Recognition

4. Key specifications

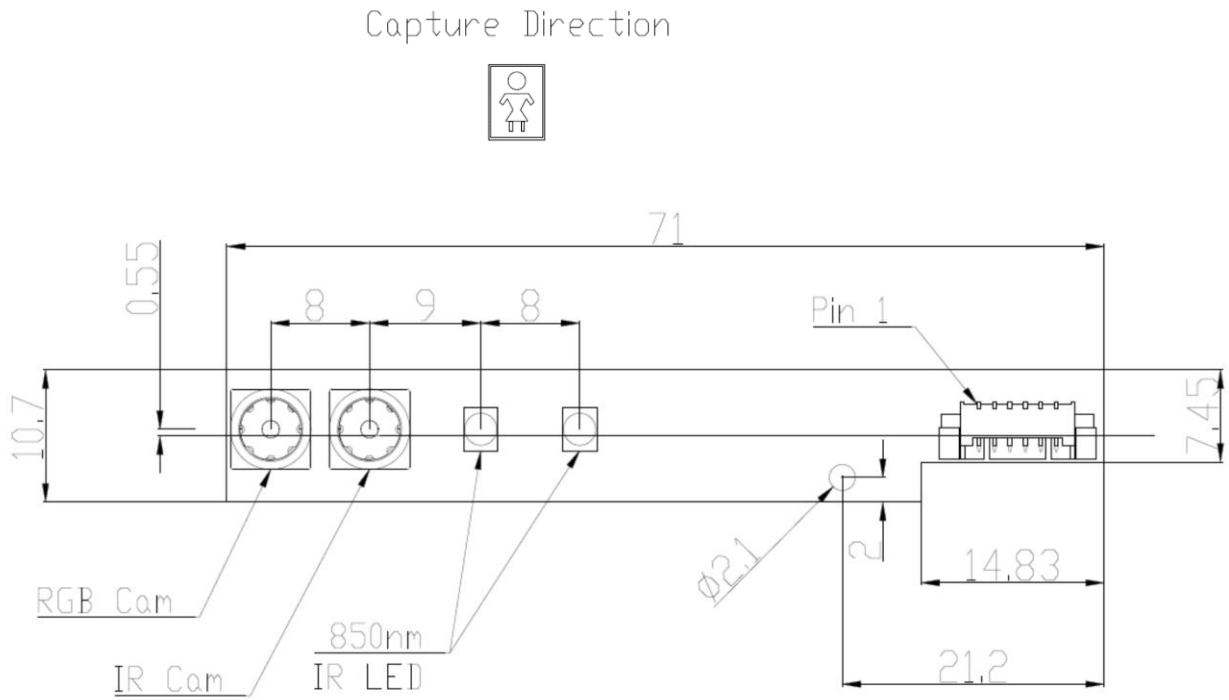
	IR Camera	RGB Camera
Interface	USB2.0	
Compatibility	USB Video Class	
Image Sensor	GC0308 1/6.5" CMOS	GC0308 1/6.5" CMOS
CMOS sensor Active Pixels	640(H) x 480(V)	640(H) x 480(V)
Pixel Size	3.4 x 3.4 μm	3.4 x 3.4 μm
Shutter Type	Electronic rolling shutter	Electronic rolling shutter
Image/Video Format	YUY2, MJPG	YUY2, MJPG
Output Interface	USB2.0	USB2.0
Operating Temperature	-20°C to +70°C	-20°C to +70°C
Stable Image temperature	0~50°C	0~50°C
FOV	D: 69° H: 58° V: 45°	D: 69° H: 58° V: 45°
Lens Construction	3P+ IR	3P+ IR
IR Filter	T _{avg} ≥ 90% 850±10nm	T _{avg} ≥ 97% 440~635 nm
Max Frame Rate	30 fps @VGA, MJPG	30 fps @VGA, MJPG
Operate Temperature	-20°C ~ +70°C	
Stable image Temperature	0°C ~ +60°C	
Ambient illumination	500~700Lux (In Door)	
Power Consumption	IR Camera+ RGB Camera	
Voltage	5V	
Rating Current	250mA (max.)	
Watt	1.25W (max.)	

Max Frame Rates (fps)	
	640x480
YUY2	20
MJPG	30

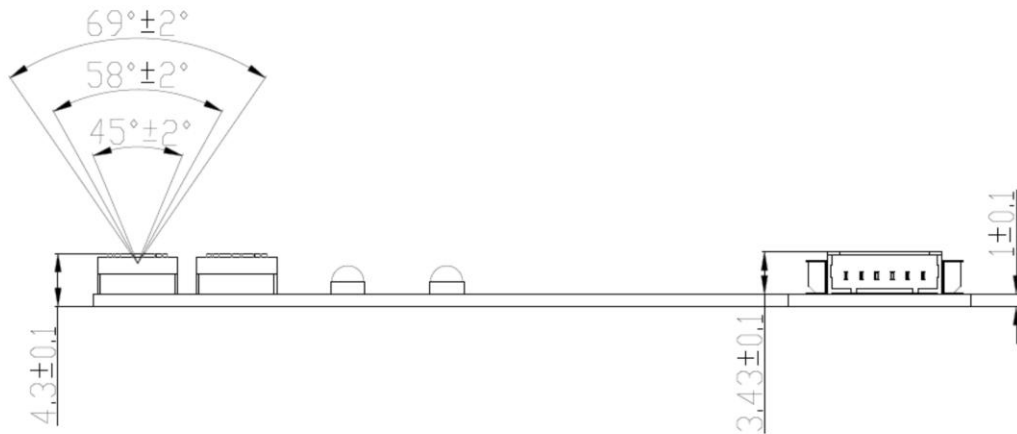
5. Pin Description

Pin Description			
Pin Number	Name	Pin Type	Function Description
1	D+	DP	USB Data Plus
2	D-	DM	USB Data Minus
3	VCC	Power	Camera Power 3.3V
4	DGND	Ground	System Ground
5	VCC	Power	IR LED Power 5.0V
6	DGND	Ground	System Ground

6. Outline Specification



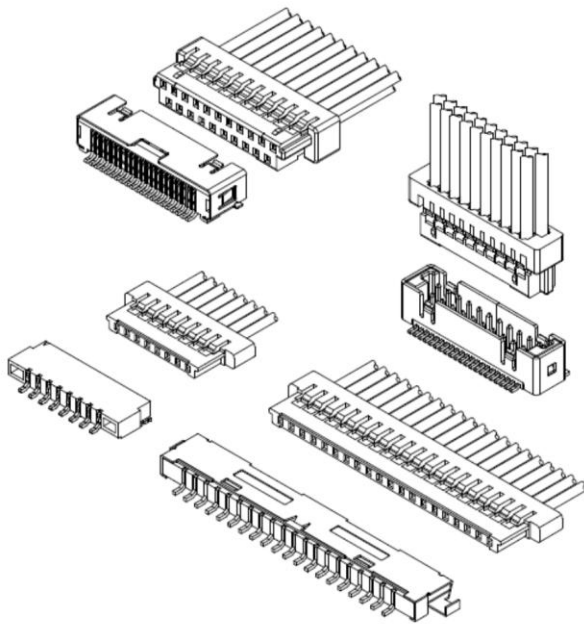
IR LED: on when IR cam on
off when IR Cam off



7. Connector Specification

A1255 FIS CONNECTOR

1.25mm Pitch/Disconnectable Crimp style connectors

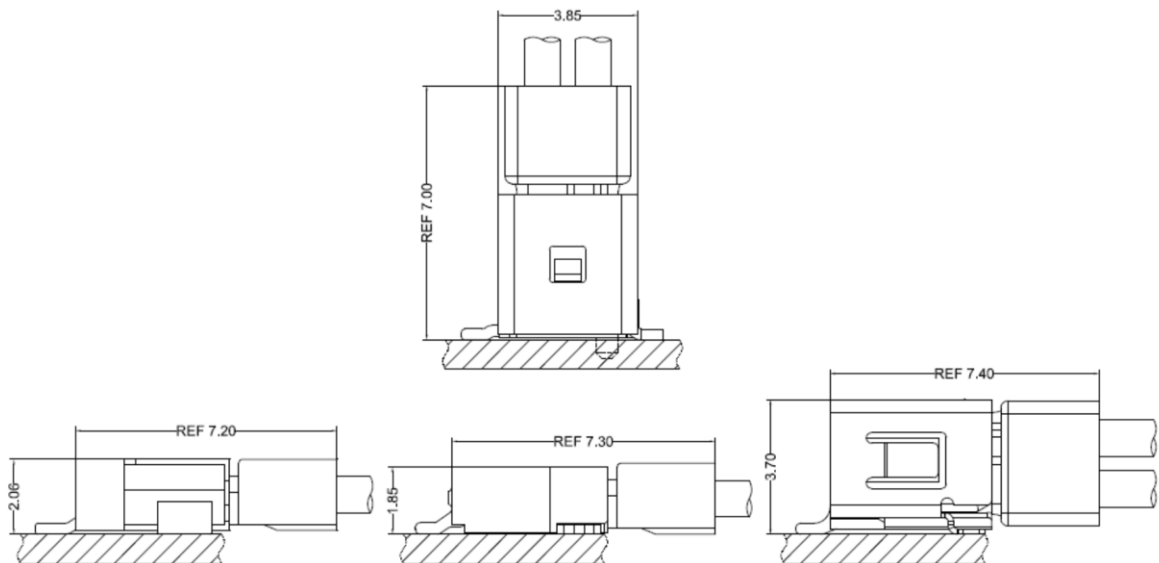


Specifications:

- Current rating: 1.0 A / AC,DC
- Voltage rating: 200 V AC/DC
- Temperature range: -40 °C ~ +105 °C
(Including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 40m Ω max
Insulation resistance: 100 M Ω min
Withstanding voltage: 500 VAC/minute
Applicable wire: Conductor size/ AWG#32~#28
Insulation O.D./ 0.38 to 1.00 mm
- * Compliant with RoHS2/ REACH/ HF
- * Refer to "General Instruction and Notice when using Terminals and Connectors"
- * Contact CSG for details

Material:

Housing: PA66/UL94-V0;Color:Black
Terminal: Phosphor/ Tin-plated,Gold-Plated
SMT Wafer Housing: LCP/ PA6T,UL94-V0;
Color:A=Natural
SMT Wafer Pin: Phosphor/ Tin-plated,Gold-Plated
Wafer Fixed Foot: Brass/ Tin-plated



8. IR LED specification

Fig.1 Forward current vs.Forward voltage

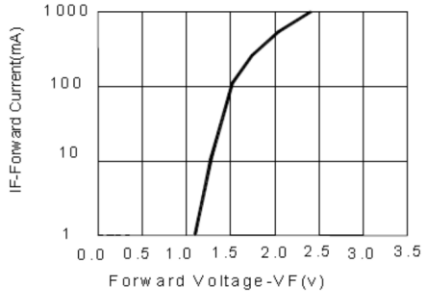


Fig.2 Relative intensity vs. Wavelength

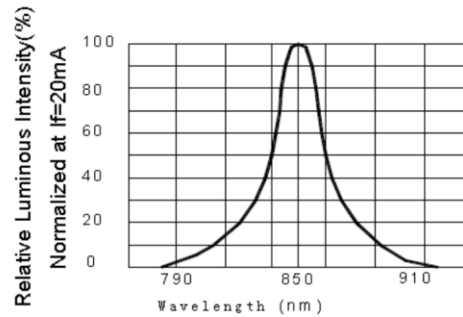


Fig.3 Relative Radiant Flux vs.Forward current

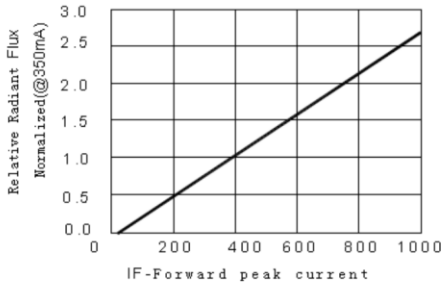


Fig.4 Forward Voltage(@ 350mA) vs Ambient temperature

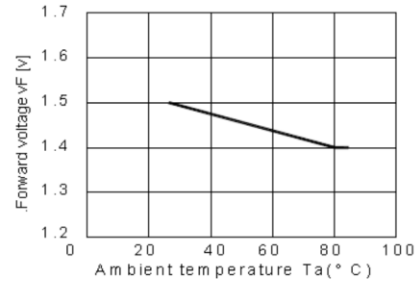


Fig.5 Relative Radiant Flux(@ 350mA) vs. Ambient temperature

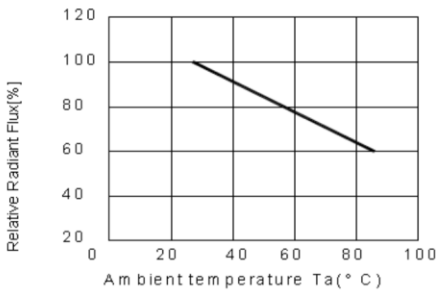


Fig.6 Maximum Driving Forward DC Current vs. Ambient Temperature(Derating based on Tj max = 115 °C)

