NCM12-FC-55 is a color module with built-in ISP that complies with Quad VGA pixels.
It has 1280 horizontal and 960 vertical pixels and via 1/3.8" optical format.
The camera is equipped with a high-performance image processing engine,
and its control software is coded in ROM,
The compact size is achieved by ROM-coding the control software.

1.Features

- Small all-in package
- HDR
- Highly sensitive
- I2C

2.Specification

● Image Sensor	1/3.8-inch CMOS color sensor
● Shutter Type	Rolling shutter
● Dimension	16 × 16 [mm] ※1
● Effective Pixels	1280(H) × 960(V) ※2
● Pixel Size	2.9μm(H) × 2.9μm(V)
● Output Interface	Digital 8bit parallel
● Output Signal Format	YCbCr422
● Frame rate (Max.)	30fps
● Function	Auto Exposure Control, Auto White Balance, Auto Gain Control, HDR, Image Inversion (up/down, left/right), Flicker correction, etc.
● Angle of View (Typ.)	(H)56°/(V)43°/(D)68°:1280(H)x960(V) (H)56°/(V)33°/(D)63°:1280(H)x720(V)
● Optical Filter	IRCF
● F Number	F2.8
● Connection Type	FFC
● Power Consumption (Typ.)	250 [mW]

※1 : FPC part is not included
※2 : Standard output setting is 1280(H)x720(V) setting.

3. Recommended Operating Conditions

● Analog Power Supply (AVDD)	2.9 ± 0.15	[V]
● Digital Power supply (DVDD)	1.1 ± 0.1	[V]
● I/O Power supply (HVDD)	1.8 ± 0.1	[V]
● Operating Temperature	-20 ～ +60	[℃] ※3
● Storage Temperature	-30 ～ +70	[℃] ※3

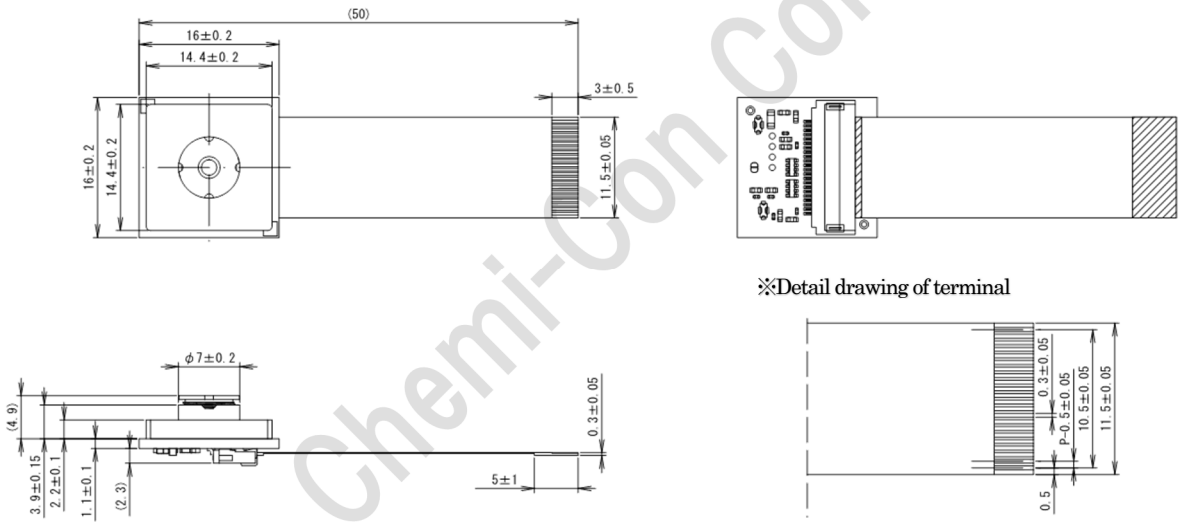
※3 : No condensation

4. Terminal Description

No	Symbol	I/O	Terminal Description	No.	Symbol	I/O	Terminal Description
1	DVDD	-	Digital power supply	12	DATA6	O	Digital data output (Data6)
2	DGND	-	Digital ground	13	DATA5	O	Digital data output (Data5)
3	PCLK	O	Data clock	14	DATA4	O	Digital data output (Data4)
4	DGND	-	Digital ground	15	DATA3	O	Digital data output (Data3)
5	HSYNC	O	Horizontal synchronous signal	16	DATA2	O	Digital data output (Data2)
6	VSYNC	O	Vertical synchronous signal	17	DATA1	O	Digital data output (Data1)
7	HVDD	-	I/O power supply	18	DATA0	O	Digital data output (Data0)
8	SDA	I/O	I2C serial data	19	AGND	-	Analog ground
9	SCL	I	I2C serial clock	20	MCLK	I	System clock
10	RESET	I	System reset	21	AGND	-	Analog ground
11	DATA7	O	Digital data output (Data7)	22	AVDD	-	Analog power supply

5. External Dimensions

【Unit：mm】



6. Image Capture Polarity

Image