

Product Specification

Item# T01-NF 80x60 ToF Module

APPLICATION SCENARIOS

- ▶ Gesture recognition
- ▶ General robot navigation and localization
- ▶ Environment scanning and 3D re-construction
- ▶ Service robot or industrial application
- ▶ Home service and vacuum robot
- ▶ General simultaneous localization and mapping (SLAM)
- ▶ Auto guided vehicle (AGV) localization and obstacle avoidance

FEATURES

- ▶ Tiny size
- ▶ Thermal aware design
- ▶ 8 bits DVP port
- ▶ Frame rate up to 1000fps (Customized profile)
- ▶ Provide point cloud and RAW depth data
- ▶ One 850nm high efficient VCSEL light source
- ▶ FOV (D:H:V) 92°:74°:57.5°
- ▶ Support calibration data in each unit
- ▶ Customized depth range by request
- ▶ SDK support both PC and embedded systems with Windows and Linux



OPTICAL

Technology	Time of Flight (ToF)
Detection range	0.25 ... 4.0 m
Light source technology	VCSEL
Wave length	850nm
Optical Power	1W
FOV (D:H:V)	92°:74°:57.5°
Barrel Diameter	φ7.00mm
Max. image circle	φ3.00mm
Resolution	80x60
Accuracy	1m~4m ±1.5%/0.25m~1.5m ±3.3cm

MECHANICAL

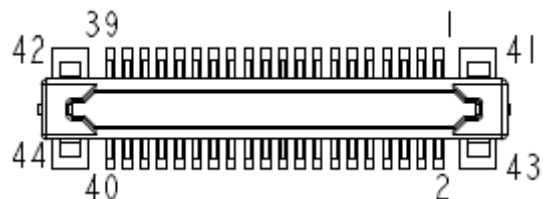
Dimensions (l × w × h)	42.094 × 30.0 × 10.9 mm
Position Hole	0.8mm
Screw Hole	M2
Temperature range	0°C ... 60°C

Software

SDK	Windows/Linux
Platform	x64/ARM HF/ARM64
TI SDK	Open Source (GitHub)
Compatible	OpenCV/ROS/PCL

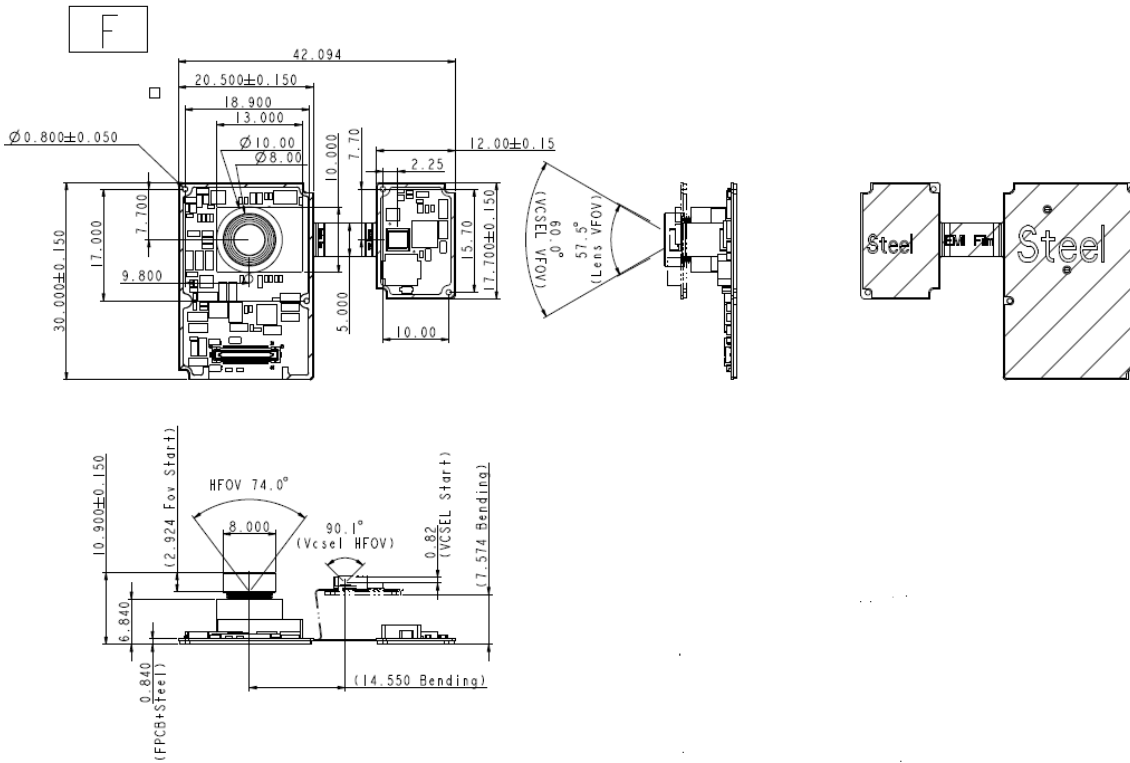
ELECTRICAL

IOVDD	3.3V@50mA
DVDD3V3	3.3V@100mA
AVDD3V3	3.3V@50mA
AVDD1V8	1.8V@100mA
VDD MIX	1.8V@560mA (max.)
VDD5V	5.0V@600mA (max.)
MCLK	24MHZ



T01 module equips a connector whose part number is BM24-40DS_2/0.35V(51) of HIROSE ELECTRIC CO.,LTD. The corresponds connector is BM24-40DP_2/0.35V(51).

Dimensions



T01 EV Kit available

● T1 TOF Module

- TI OPT8320 CSP Type, 1/6" CMOS Sensor, 80 x 60
- Frame Rate: Scalable up to 1,000 fps
- 850nm VCSEL
- M7 IR lens

● Interface

- USB 2.0
- Frame rate up to 160fps (Customized profile)

● Software

- TI Voxel SDK
 - Source code GitHub download
- Gigabyte SDK
 - Windows x64
 - Linux ARMHF/ARM64
 - Gesture example

● In-Box Materials

- T01-U2 X 1
- Micro USB Cable

