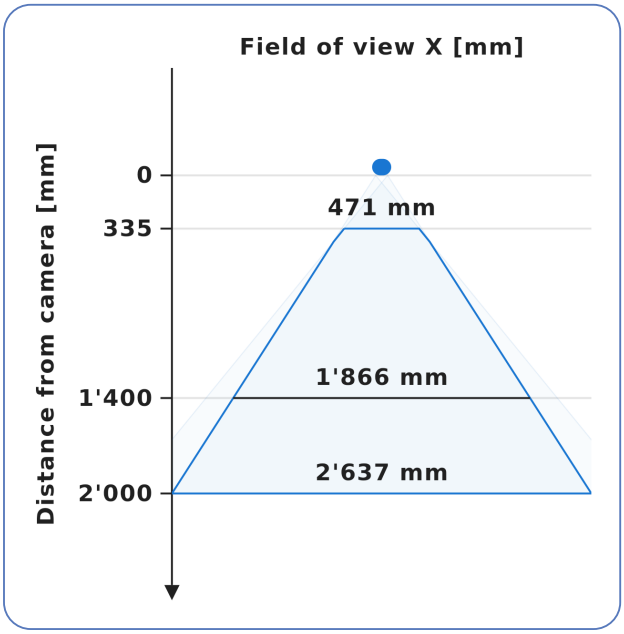
B57-4/1400-N/3-BL

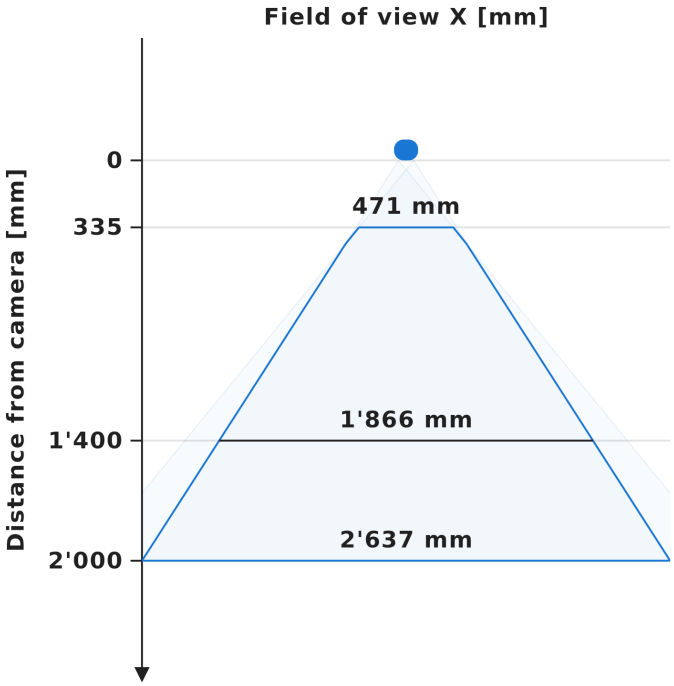


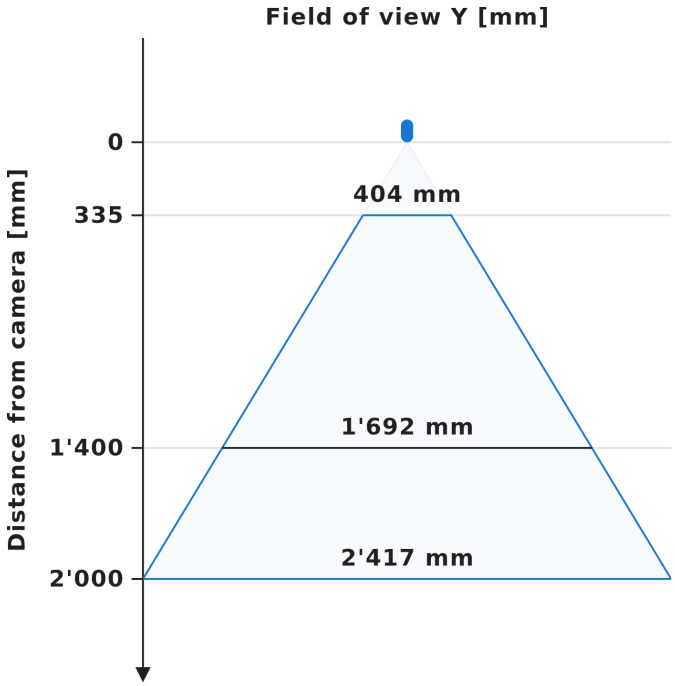


Overview

Full model name	B57-5M0C-4/28|4/28|0/0|1400-75/3-BL	
3D technology	Active Stereo with FlexView Technology	
Sensors & projector	3D stereo	2'472 × 2'064 (5 MP)
	Projector	200 W, Blue (465 nm), FlexView Pattern Pulse limit 120 ms, duty cycle 10 %
	Front LED	20 W, White Pulse limit 120 ms, duty cycle 10 %
Lenses	Stereo	4 mm, F2.8
	Projector	4 mm, F2.8

Operating Distance & Field of View



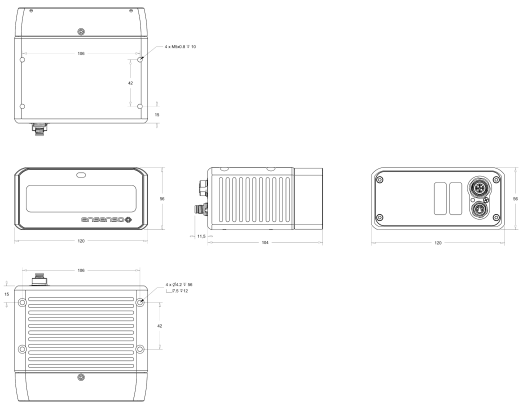


Focus distance	1'400 mm
Operating distance	335–2'000 mm (extended range, blur ≤ 2.5 px) 486–2'000 mm (optimal range, blur ≤ 1.5 px)
Field of view	67° (H) x 62° (V)
Baseline	75 mm
Half vergence angle	3.0°

Performance over Operating Distance

Distance (mm)	FoV X (mm)	FoV Y (mm)	Local noise (mm)	Pixel size (mm)	Blur (px)
335	471	405	0.12	0.22	2.49
400	576	483	0.17	0.26	1.97
600	839	725	0.39	0.39	1.07
800	1'096	967	0.69	0.52	0.61
1'000	1'352	1'209	1.07	0.64	0.34
1'200	1'609	1'450	1.55	0.77	0.16
1'400	1'866	1'692	2.11	0.90	0.03
1'600	2'123	1'934	2.75	1.03	0.12
1'800	2'380	2'175	3.48	1.16	0.19
2'000	2'637	2'417	4.30	1.29	0.24

Mechanical Specifications



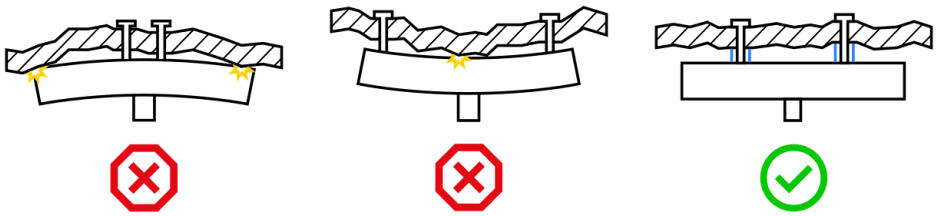
Dimensions	120 × 56 × 104 mm
Weight	1'100 g
Housing material	Aluminum
Housing IP rating	IP65, IP67
Vibration (sinusoidal)	30–500 Hz / 10 g IEC 60068-2-6
Shock	80 g / 1.9 ms, 25 g / 6 ms IEC 60068-2-27
Cleaning	Housing: water, iso-propanol, ethyl alcohol Lenses: water, iso-propanol

The above IP ratings apply only when a network cable is attached.

Do not use abrasive cleaning equipment or substances for optical surfaces and windows; use only optical quality tissue/cloth.

Mounting

Refer to the product manual for mounting instructions.



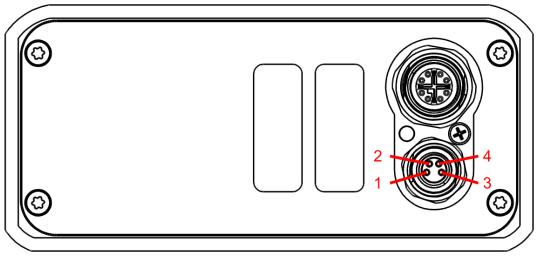
Environmental Conditions

Recommended operational temperature	0–40 °C
Extended operational temperature*	0–50 °C
Storage temperature	-10–50 °C
Relative humidity	0–100 % (non-condensing)

* Devices can be operated above the recommended operational temperature, up to the extended limit, without risk of failure, but with reduced performance. This includes increased image and point cloud noise, reduced projector duty cycle and power output, and reduced calibration accuracy. Prolonged operation in a hot environment also reduces the lifetime of the light source and electronic components.

Electrical Specifications

GPIO Port



Pin	Function	Specification
1	Power Input	24 V DC (min 20, max 27 V) Max current: 10 A
2	Trigger Input	0–24 V Switching threshold rising: 6.7 V, falling: 6.3 V
3	Ground	-
4	Flash Output	0–24 V Voltage level low < 0.7 V, high > dc_in - 0.7 Max current (sink / source): 30 / 30 mA

The trigger and flash signals are ground referenced and push-pull driven.

DC Power Supply

Power supply requirements	24–27 V, 10 A
Internal fuse	Internal 3.5 A fuse
Connector	M8 4 Pin, male (camera)

Cable

Cable length	Required wire thickness	Required power supply
0–5 m	≥ 0.5 mm²	≥ 24 V
5–15 m	≥ 1.5 mm²	≥ 24 V
15–25 m	≥ 1.5 mm²	≥ 27 V
> 25 m	≥ 2.5 mm²	≥ 27 V

Ethernet & Power-over-Ethernet

Ethernet standards	1 GBit
Connector	M12 8 Pin X-Coded, female (on camera)
Power-over-Ethernet	PoE++ PD Class 8, 90 W required Projection power is limited with PoE compared to DC power.
Cable requirements	CAT.6 M12 8 Pin X-Coded, female (on camera)

The highest supported speed is recommended for best performance; lower speeds operate at reduced performance.

Compliance & Certifications

EN 61000-6-3:2007+A1:2011	EMC Emission
EN 55032:2015	EMC Emission
EN 61000-6-2:2005	EMC Immunity
EN IEC 61000-6-2:2019	EMC Immunity
IEC 62368-1:2018	Safety
IEC 62471:2006 Risk Group 2	Eye Safety

Accessories

Recommended Calibration Plate

Plate	Calibration Plate 390 × 390 × 4 mm
Dimensions	390 × 390 × 4 mm
Grid spacing	96 mm
Substrate	Safety glass
Part number	13510
Mounting kit	13476

Ethernet Cables

Ethernet Cable M12 X-coded to RJ45	Part no.: 13019 (5 m), 13020 (10 m), 13021 (20 m) Connectors: M12 X-coded, Cat.6A, straight, IP67 / RJ45, IP20, Cat.6A, straight, overmolded (black) Torsion resistant, robot and drag-chain compatible Ethernet cable.

GPIO / Sync Cables

M8 4-Pin Cable (Open Endings)	Part no.: 13057 (5 m), 13054 (10 m) Connectors: M8 4-Pin / Open wire ends Open wire-end cable for the M8 External port.

GPIO Adapters

Adapter Cable M12 5-Pin to M8 4-Pin	Part no.: 11078 Connectors: M12 5-Pin / M8 4-Pin Connects a B- or C57-series camera to an M12 5-Pin power supply.

Power Supplies & PoE Injectors

M12 5-Pin Power Supply (Desktop)	Part no.: 12137 Desktop power supply providing 24 V to cameras with M12 GPIO connector. Cameras with M8 connector can be powered via the M12 to M8 adapter.
PoE++ Injector, 90 W, AC Input	Part no.: 13847 Industrial 1-port 802.3bt PoE injector, DIN-rail mountable, AC input.
PoE++ Injector, 90 W, DC Input	Part no.: 13846 Industrial 1-port 802.3bt PoE injector, DIN-rail mountable, DC input.

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