

G2 Series High Resolution 3D Sensors For Shape Inspection

General Description - The ShapeDrive® G2 Series are compact, blue light area scan sensors that reliably provide three dimensional shape data at high speed for the cost comparable to a traditional machine vision system. No



additional external components like lasers or projectors are required. The sensors are designed for quantitative and precise 3D measurements for 100% quality inspection in production lines. The sensor can be connected to a host computer through a Gigabit Ethernet interface which is fully GigEV compliant. The G2 Series can operate in camera mode, in 3D mode and in a mixed mode to allow vision engineers to solve for a wide variety of machine vision tasks. Typical applications include e.g. inline inspection of plastic mold parts,

consumer goods, electronic parts, casting parts, sheet metal forming, medical, dental, biometric applications and food processing.

Key Specifications

- Measurement volume*
- Depth resolution*
- Lateral sampling *
- Acquisition time 0.8 seconds or 1.4seconds
- Blue light, completely isolated from ambient lighting conditions
- DLP based light engine
- Built in high definition CMOS image sensor with 2.3MPixel resolution
- 12 bit pixel depth
- Fully GigEV compliant interface
- ShapeDrive Software package including API (C++), COM interface, 3D Player software
- Power consumption: 12.5W
- Size: 169(L)x120(W)x50(H)mm
- Weight: approx. 900g
- Sealed housing, IP64
- Operating Temperature range: 0°C ... 35°C
- MTBF>20.000 hours
- CE compliant, DIN EN 61326-1, VDE 0843-20-1:2013-07, DIN EN61326-2-2, VDE 0843-20-2-2:2006-10
- USB 3.0/USB 3 Vision upon request

* see table below

Model options

Model	Working distance [mm]	Measurement volume [mm ³]	Lateral sampling [μm]	1σ, z-accuracy* [μm]	3σ, Reproducibility [μm]
G2-20-100-1	100	20x10x2	10	1	2
G2-20-100-2	100	20x10x5	10	2	2
G2-30-180	160	30x18x10	15	5	5
G2-60-180-1	175	60x34x40	30	10	10
G2-60-180-2	180	60x34x50	30	10	10
G2-120-180	180	120x67x50	60	15	15
G2-240-350	350	240x130x80	120	30	20
G2-300-400	400	300x165x100	150	50	30
Other FOV, lateral resolution and telecentric systems upon request					

* surface dependant

Software features

- Full sensor control , 2D/3D mode of operation
- Selectable acquisition & processing algorithms
- C++ API, COM Interface, Halcon Adapter



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