

**Helios**<sup>TM</sup>

## 3D Time-Of-Flight (ToF) Camera

LUCID's Helios ToF 3D camera has four 850nm VCSEL laser diodes and integrates Sony's new DepthSense™ IMX556PLR back-illuminated ToF image sensor with high NIR sensitivity, 10µm pixel size, and high modulation contrast ratio. The camera can produce depth data at 30 frames per second with 640×480 resolution over a Gigabit Ethernet interface. It is compliant with the GigE Vision and GenICam 3D standard for ease of integration using LUCID's Arena SDK or third-party machine vision software.



**GIG**  
VISION

GEN<i>CAM

# Helios™ 3D Time-Of-Flight (ToF) Camera

Helios Model



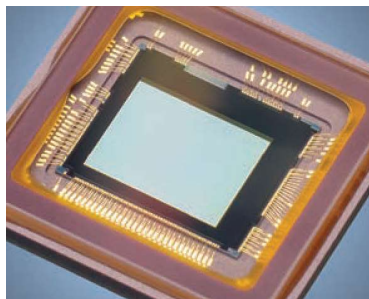
| Model          | MP     | Resolution          | FPS    | Sensor                  | Format | Pixel Size   | Shutter | Lens Mount             | GigE Interface |
|----------------|--------|---------------------|--------|-------------------------|--------|--------------|---------|------------------------|----------------|
| <b>HLS003S</b> | 0.3 MP | <b>640 x 480 px</b> | 30 fps | <b>Sony IMX556 CMOS</b> | 1/2"   | <b>10 μm</b> | Global  | <b>Integrated Lens</b> | M12            |

| Physical, Interface, and Power Information |   |
|--|---|
| Digital Interface                          | 1 Gigabit Ethernet with M12 connector IEC 61076-2-109               |
| GPIO Interface                             | 8-pin M8 connector IEC 61076-2-104                                  |
| I/O ports                                  | 1 input, 1 output, 2 bidirectional                                  |
| Dimension                                  | 55 x 55 x 77.7 mm   |
| Lens Mount                                 | Integrated S-mount lens with 6mm focal length (not user changeable) |
| Weight                                     | 280 g   |
| Power Consumption                          | < 15 w  |

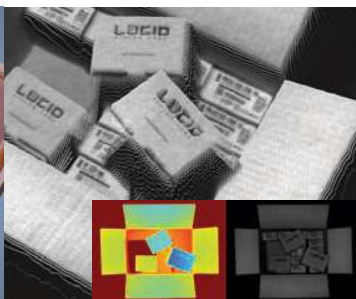
| Imaging Properties |   |
|--------------------|---|
| Working Range      | Near Mode: up to 1.5m<br>Far Mode: up to 6m |
| Accuracy           | Less than 5mm (0.3m to 1.5m)                |
| Precision          | Less than 2mm at 1m                         |
| Lens Field of View | 59° x 45° (nominal)                         |
| Illumination       | 4 x VCSEL laser diodes @ 850nm              |

Superior depth precision increases system reliability and robustness.  
 High resolution and high speed data capture reduces system cycle time.  
 Excellent price-performance value reduce your overall system cost.

## Highlights



**Sony IMX556PLR CMOS**  
 IMX556PLR feature Sony's Back Side Illumination technology with improved light collection efficiency in NIR. Better collection efficiency means pixel and sensor size can be smaller without lowering performance.



## 3D Point Cloud, Depth Map and Intensity

On camera depth processing is performed on the camera which lowers host system usage. This speeds up processing time, improves cycle time for robots and eliminates the need for expensive computing hardware.



## GenICam 3D

GenICam 3D format enables plug and play compatibility with leading machine vision software. Standardized 3D image format providing X, Y, Z coordinates as well as intensity images.