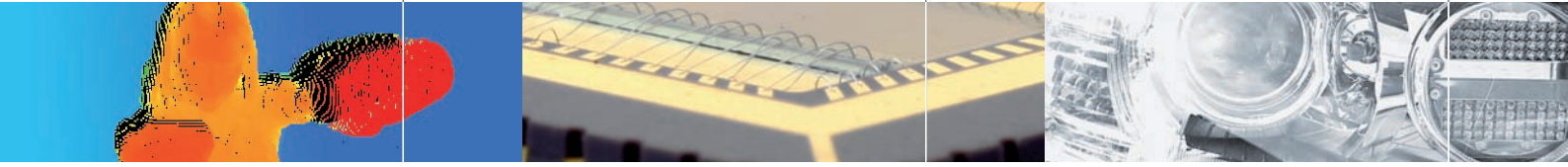


PMD [vision][®] CamCube 2.0

Datasheet V. No. 20090601



High resolution 3D video camera



PMD[vision]® CamCube 2.0 is the highest resolution all-solid-state ToF 3D camera in the world. The optical sensor, with 204x204 pixels, enables the real-time capture of distance and grayscale information. Thanks to integrated SBI technology, this innovative product can be deployed in indoor and outdoor environments. Using PMD[vision]® optics provides the best 3D performance for wide angle field of view applications. An active suppression of motion blur allows detecting fast moving objects and a ROI function (Region-Of-Interest) enables a flexible, application specific lateral resolution. PMD [vision]® CamCube 2.0 is a leading-edge camera when it comes to all-solid-state 3D imaging applications. It captures distance and grayscale information, as well as raw data, which can be used for advanced image processing. Due to the modular design of the product, hardware and software can be easily adapted in line with application-specific requirements. For example, changing the receiving lens or altering active illumination enables users to tailor the system to their specific needs. Due to the implemented firmware update ability, the CamCube 2.0 is adaptable for improved future features. PMD[vision]® CamCube 2.0 comes with the latest generation of our visualization tool, CamVis 3, our application programming interface PMDSK 2 and our MATLAB interface PMDMDK helping customers to make their ideas a reality.



basic camera configuration

[Applications]

- Games and consumer electronics
- Media and retail
- Mobile robotics
- Factory automation
- Security & surveillance
- Automotive industry
- Medical technology and life sciences

[Key features at a glance]

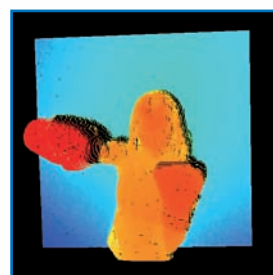
- 204 x 204 pixels
- Suitable for indoor and outdoor environments – thanks to SBI
- Simultaneous capture of grayscale images and distance information
- Suppression of Motion Blur
- Wide angle field of view using optimized PMD[vision]® optics
- Flexible CS-mount lens adapter for different fields of view
- Flexible measurement ranges using modular light sources
- Flexible readout with programmable region-of-interest (ROI)
- High-speed interface providing raw data for image processing
- Multi-camera operation using different frequency channels
- Firmware update ability
- Software package for data processing and visualization
- C API and MATLAB interface



camera unit



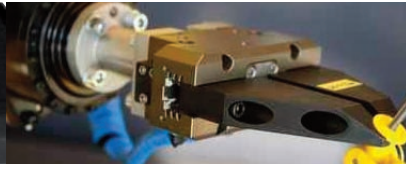
illumination unit



color coded 3D



3D & gray scale






Specifications

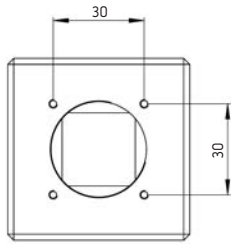
Parameter	Value*	Notes
Type of Sensor	PhotonICs® PMD 41k-S (204 x 204)	With SBI (Suppression of Background Illumination)
Measurement Range	0.3 to 7 m	
Repeatability (1 σ)	< 3 mm	Typical value, central sensor area @2 m distance, 90% reflectivity
Frame Rate (3D)	25 fps	Typical value, depending on camera settings
Field of View	40° x 40°	CS mount lens: f = 12,8 mm; F# = 1,4
Illumination Wavelength	870 nm	Eye safety class 1
Power Supply [V]	12V \pm 10%	
Interface	USB2.0	
Operating Temperature	0°C to 50°C	
Storage Temperature	- 20°C to 85°C	

* Preliminary data for basic camera configuration

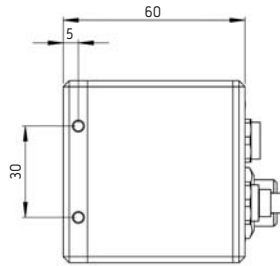
Housing

Camera Housing	60 mm x 60 mm x 60 mm	Without lens and plugs
Illumination Housing	60 mm x 67 mm x 60 mm	Without plugs, two illumination sources in basic configuration
Illumination Interface: Binder series 712, female connector, 8 pin	1. LED+ (LVDS+) 2. LED- (LVDS-) 5. GND 6. +12V 7. +12V 8. GND	
Power Supply: Binder series 712, male connector, 5 pin	1. GND 2. GND 4. +12V 5. +12V	
Interface: USB-A to Mini-USB	Standard Pinning	

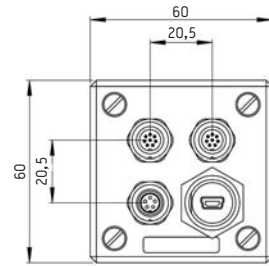
[Dimensions]



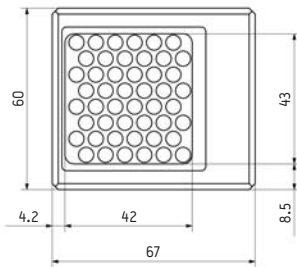
front view of camera housing



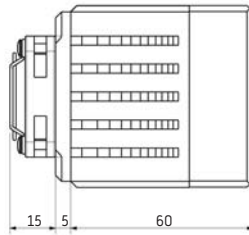
side view of camera housing



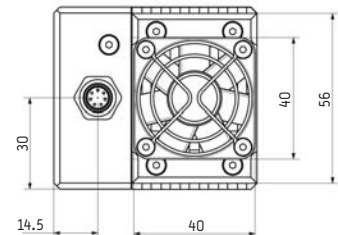
back view of camera housing



front view of illumination housing



side view of illumination housing



back view of illumination housing

[Ordering information]

Camera type	PMD[vision]® CamCube 2.0
Ordering number	700.000.051
Delivery content of basic camera configuration:	<ul style="list-style-type: none"> 1 camera unit 2 illumination units including connection wires 1 PMD[vision]® optics lens 1 power supply 1 USB wire 1 software CD delivered in metal case
For quotations, pricing and delivery information, please contact us.	



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