



Technical data Z+F IMAGER 5006i



The imaging 3D laser measurement systems are applicable in the fields of digital planning of factories, industrial plants, architecture, protection of historic monuments, landscape and virtual reality. They are based upon the spot Z+F Laser Measurement System LARA:

Laser measurement system

Ambiguity interval:	79 m
Min. range:	0.4 m
Resolution Range:	0.1 mm
Data acquisition rate:	≤ 508 000 pxl/sec.
Linearity error up to 50m: ¹	≤ 1 mm
Range noise at 10 m: ^{1 2}	
> Reflectivity 10% (black):	1.2 mm rms
> Reflectivity 20% (dark grey):	0.7 mm rms
> Reflectivity 100% (white):	0.4 mm rms
Range noise at 25 m: ^{1 2}	
> Reflectivity 10% (black):	2.6 mm rms
> Reflectivity 20% (dark grey):	1.5 mm rms
> Reflectivity 100% (white):	0.7 mm rms
Range noise at 50 m: ^{1 2 3}	
> Reflectivity 10% (black):	6.8 mm rms
> Reflectivity 20% (dark grey):	3.5 mm rms
> Reflectivity 100% (white):	1.8 mm rms
Range drift over temp. (-10 – 45°C):	negligible due to internal reference

Optical transceiver

Laser	visible
Beam divergence:	0.22 mrad
Beam diameter at 1 m distance:	3 mm circular
Laser safety class:	3R (ISO EN 60825-1)

Deflection unit

System vertical:	Rotating mirror
System horizontal:	Rotating device
Field of view vertical:	310°
Field of view horizontal:	360°
Resolution vertical:	0.0018°
Resolution horizontal:	0.0018°
Accuracy vertical: ¹	0.007° rms
Accuracy horizontal: ¹	0.007° rms
Max. scanning speed vertical:	≤ 50 rps
Typ. Scanning speed vertical:	25 rps

Resolution

Resolutions:	Pixel / 360° (vertical, horizontal)	Scanning time / 360°
"preview":	1 250	25 sec
"middle":	5 000	1 min 40 sec
"high":	10 000	3 min 22 sec
"super high":	20 000	6 min 44 sec
"ultra high":	40 000	26 min 40 sec
Max resolution for selections:	100 000	-

¹ detailed explanation on demand – please contact imager5006@zf-laser.com

² data acquisition rate: 127 000 pxl/sec., raw data, in High Power Mode

³ values extrapolated



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	<i>Miscellaneous</i>	
	Tilt measurement:	
	> Resolution:	1/1 000°
	> Accuracy:	1/500°
	Data interface:	Ethernet / USB 2.0
	Data storage:	Internal HDD (≥ 60 GB)
	Communication interface:	Ethernet / WLAN
	Integrated operation panel:	
	> Display:	4 Lines
	> Keypad:	6 Buttons
	Power supply:	
	> Input voltage:	24V DC (scanner) 90–260V AC (power unit)
	Power consumption:	65 W max.
	Battery life time:	
> Changeable battery pack	2,5 h	
> External battery (TRAPP-15-24)	4 h	
Ambient conditions:		
> Calibrated temperature:	-10 °C - 45 °C	
> Storage temperature:	-20 °C - 50 °C	
> Humidity:	non-condensing	
> Target reflectivity:	no retro-reflectors	
> Illumination:	all conditions from darkness to daylight	
<i>Dimensions and weights</i>		
Scanner (w x d x h):	286 mm x 190 mm x 372	14 kg
Bottom of scanner to horizontal axis	242 mm	
Tripod:		
> Height:	approx. 80 cm –140 cm	9 kg
> Diameter:	approx. 120 cm	