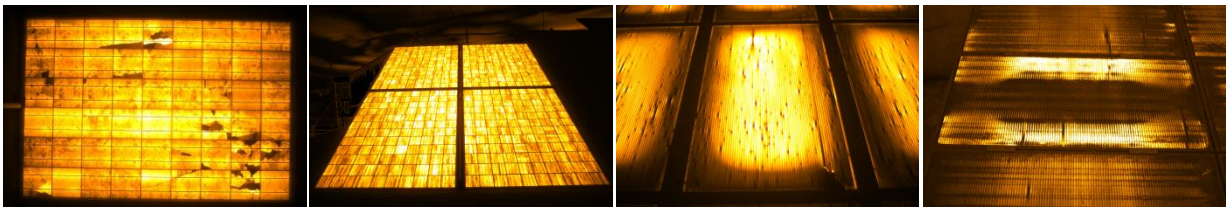
NightSy Nighttime Electroluminescence System

Application	Electroluminescence inspection of PV strings and single modules directly on site. Modules don't need to be dismounted. • Pre-delivery and post-delivery inspection • Inspection before and after installation • Failure analysis of defect modules • Acceptance and due diligence testing
Defect detection	PID potential induced degradation, polarization, dead cells, inactive cell area, disjunct fingers, disjunct cell interconnections, microcracks, impact damage, ohmic losses, broken freewheel diodes, inhomogeneous cells, shunts and partial hot spots
PV technology	All-round Kit: Crystalline silicon, thin film CdTe, thin film CI(G)S c-Si Kit: only crystalline silicon, but better image quality than All-round Kit CdTe Kit: only thin film CdTe, but better image quality than All-round Kit CIS Kit: only thin film CI(G)S, but better image quality than All-round Kit
Ambient conditions	Outdoor night sky with LED lighting Late twilight time with Stray Light Removal Kit Dark overcast day (< 100 Lux) with Lock-In Kit Indoor with LED lighting
Operating distance (f = 50 mm lens)	Minimum: 0.3m; Field of view: 22cm x 14cm Typical: 2.8 m; Field of view: 2m x 1,3m Other lenses for different field of view available.
Supplied lens	f=50mm; others upon request
Measurement time	Typically 1s
Focus	Manual focus on EL signal Auto-Focus on EL signal with Auto-Focus Kit
Image output	JPEG image preview on camera display BMP: 8 bit 3 color, yellow false color map after post processing JPEG: 8 bit 3 color, yellow false color map after post processing TIFF: 14 bit raw data; 16 bit with Lock-In Kit after post processing TXT: 14 bit raw data; 16 bit with Lock-In Kit after post processing
Post processing	Basic functions: Image output generation, false color representation, intensity linear and logarithmic scaling Advanced functions: Zoom function, histogram, line scan, module defect annotation, report generation
Certification	CE



Multi-Si EFG-Si CIS CdTe

Right Reserved to change without notice due to technological advances.
This data sheet shall not be binding to any system specification in case of purchase order.

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NightSy 12 Camera

Modified electronic viewfinder interchangable lens camera

Resolution	4240x2832 pixel - 12,1 MP
Exposure	1/8000 s – 30 s
Exposures	300 with one battery charge
Image Stabilization	upon request
Handling	tripod, riser, handheld
Ingress Protection	in transport case: IP 54
Weight	without lens: 500 g
Dimensions	without lens: width 150 mm; height 100 mm; depth 60 mm
Accessories	AC adapter (1); Battery charger (1); Power cord (1); Rechargeable battery (2); Micro USB cable (1); Shoulder strap (1); Body cap (1); English instruction manual (1); Tripod (1); Tripod pistol head (1); Rugged transport case (1)

DC Power Source

Output	1,5 kW; 150 Vdc, 10A;
Input	85-256 Vac, 47~63Hz, single phase
Ingress Protection	in transport case: IP 54
Dimensions	in transport case: width 600 mm; height 150 mm; depth 900 mm
Weight	in transport case: 8 kg
Accessories	English instruction manual (1); 20m MC4 PV Cable (1 pair); MC4-MC3 Adapters (1 pair); MC4 toolset (1)

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