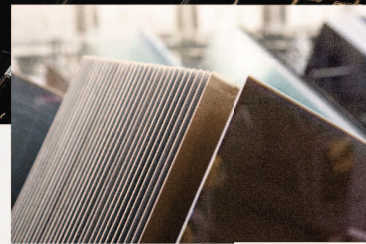


The Characteristics of Apollo Products

HNS-ST55/60/63H/65H



Advantages

- **More balanced sunlight absorption**
The three layer thin film deposition design allows for more balanced sunlight absorption, therefore increasing the efficiency of the modules.
- **Better performance under weak light/scattered light conditions**
As thin film modules can generate power in cloudy weather, shady places and twilight hours in the morning and evening, more power can be generated during the life cycle of the modules, i.e., more power is generated per installed watt.
- **Low Temperature Coefficient**
Our products have better performance under higher temperatures and can generate more power in tropical and desert regions.
- **Shorter energy payback period and lower costs**
Our thin film modules require less silicon and energy consumption during production, therefore reducing their energy payback period and costs significantly.

The Characteristics of Apollo Products

HNS-ST55 / 60 / 63H / 65H

Electrical Characteristics at STC (1000W/m², 25°C, AM1.5)

Module Type		HNS-ST55	HNS-ST60	HNS-ST63H	HNS-ST65H
Normal Power at STC	Pmax(W)	55	60	63	65
Voltage at Pmax	Vmp(V)	67	69	70	70
Current at Pmax	Imp(A)	0.82	0.87	0.90	0.93
Open Circuit Voltage	Voc(V)	87	88	89	89
Short Circuit Current	Isc(A)	1.00	1.06	1.09	1.12

Electrical Characteristics at NOCT (800W/m², 45°C, AM1.5)

Maximum Power	Pmax(W)	42	45	48	49
Voltage at Pmax	Vmp(V)	62	64	65	65
Current at Pmax	Imp(A)	0.67	0.71	0.73	0.76
Open Circuit Voltage	Voc(V)	81	82	83	83
Short Circuit Current	Isc(A)	0.81	0.86	0.89	0.91

Temperature Coefficients

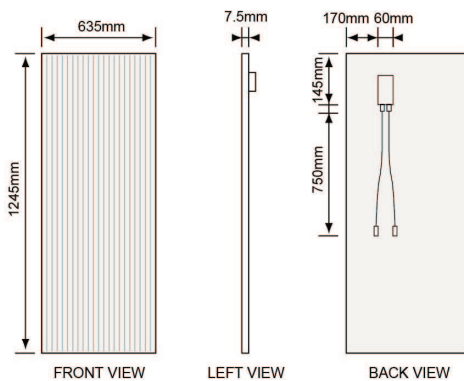
Maximum Output Power (% / °C)		-0.281
Open Circuit Voltage (% / °C)		-0.347
Short Circuit Current (% / °C)		+0.0715

Key Structural Parameters

Front Glass		3.2mm TCO
Rear Glass		4.0mm non-tempered glass
Encapsulation Material		EVA EVA+Butyl
Cell Type		Triple-Junction (a-Si / a-SiGe / a-SiGe)
Junction Box(Protection Class)		IP67
Length		1245mm
Width		635mm
Thickness		7.5 mm(Exclude Junction box)
Weight		14.4Kg
Length of Junction Box Cable		450 or 750mm
Plug Connector		Compatible MC4

Others

Maximum System Voltage		1000V
Maximum Source Circuit Fuse		2A
Tolerance on Pmax		0 / +3W
Operating Temperature		-40°C - + 85°C
Mechanical Load		2400Pa
Certificates		CE, TUV SUD, UL, CQC, MCS, CEC(AUS) TUV SUD CE



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