

111 (BILL + 114 (B) (BILLIN)

# Q.PLUS DUO L-G5.1 360-375

**EXCELLENT RELIABILITY** AND OUTSTANDING YIELDS







THE IDEAL SOLUTION FOR:



Ground-mounted solar power plants



LOW ELECTRICITY GENERATION COSTS

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 18.9%.



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# INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behavior.



# **ENDURING HIGH PERFORMANCE**

Long-term yield security with Anti LID and Anti PID Technology<sup>1</sup>, Hot-Spot Protect and Traceable Quality Tra.Q™.



### **EXTREME WEATHER RATING**

High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (2400 Pa) regarding IEC.



## A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance guarantee<sup>2</sup>.



#### STATE OF THE ART MODULE TECHNOLOGY

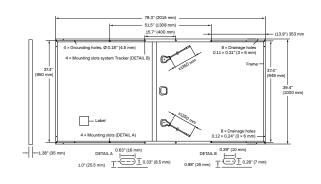
Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

<sup>1</sup> APT test conditions according to IEC/TS 62804-1:2015, method B (-1500 V, 168 h) <sup>2</sup> See data sheet on rear for further information



## **MECHANICAL SPECIFICATION**

Format	79.3 × 39.4 × 1.38 in (including frame) (2015 × 1000 × 35 mm)			
Weight	51.8 lbs (23.5 kg)			
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology			
Back Cover	Composite film			
Frame	Anodized aluminum			
Cell	6 × 24 multicrystalline Q.ANTUM solar half cells			
Junction Box	$2.09-3.98\times1.26-2.36\times0.59-0.71\text{in}$ (53-101 $\times$ 32-60 $\times$ 15-18 mm), Protection class IP67, with bypass diodes			
Cable	4 mm² Solar cable; (+) ≥53.1in (1350 mm), (−) ≥53.1in (1350 mm)			
Connector	Stäubli MC4, Amphenol UTX, Renhe 05-6, Tongling TL-Cable01S, IP68 or Friends PV2e; IP67			

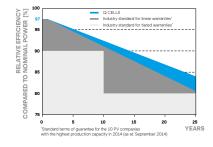


## **ELECTRICAL CHARACTERISTICS**

POV	VER CLASS			360	365	370	375
MIN	IIMUM PERFORMANCE AT STANDARD	TEST CONDITIO	NS, STC <sup>1</sup> (PO)	WER TOLERANCE +5 W / -0	W)		
	Power at MPP <sup>1</sup>	P <sub>MPP</sub>	[W]	360	365	370	375
Minimum	Short Circuit Current <sup>1</sup>	I <sub>sc</sub>	[A]	9.87	9.92	9.96	10.01
	Open Circuit Voltage <sup>1</sup>	V <sub>oc</sub>	[V]	46.80	47.03	47.26	47.49
	Current at MPP	IMPP	[A]	9.35	9.41	9.47	9.54
2	Voltage at MPP	V <sub>MPP</sub>	[V]	38.52	38.79	39.05	39.32
-	Efficiency1	η	[%]	≥17.9	≥18.1	≥18.4	≥18.6
MIN	IIMUM PERFORMANCE AT NORMAL C	PERATING CON	DITIONS, NMC	DT <sup>2</sup>			
	Power at MPP	P <sub>MPP</sub>	[W]	268.8	272.5	276.2	280.0
nimum	Short Circuit Current	I <sub>sc</sub>	[A]	7.95	7.99	8.03	8.06
	Open Circuit Voltage	V <sub>oc</sub>	[V]	44.03	44.25	44.46	44.68
Σ	Current at MPP	I <sub>MPP</sub>	[A]	7.35	7.40	7.46	7.51
	Voltage at MPP	V <sub>MPP</sub>	[V]	36.58	36.82	37.05	37.28

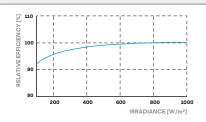
<sup>1</sup>Measurement tolerances P<sub>MPP</sub>±3%; I<sub>sc</sub>; V<sub>oc</sub>±5% at STC: 1000 W/m<sup>2</sup>, 25±2°C, AM 1.5G according to IEC 60904-3 • <sup>2</sup>800 W/m<sup>2</sup>, NMOT, spectrum AM 1.5G PERFORMANCE AT LOW IRRADIANCE

Q CELLS PERFORMANCE WARRANTY



At least 97% of nominal power during first year. Thereafter max. 0.54% degradation per year. At least 92.0% of nominal power up to 10 years. At least 84% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²)

#### **TEMPERATURE COEFFICIENTS**

Temperature Coefficient of I <sub>sc</sub>	α	[%/K]	+0.04	Temperature Coefficient of V <sub>oc</sub>	β	[%/K]	-0.28
Temperature Coefficient of P <sub>MPP</sub>	Y	[%/K]	-0.37	Normal Module Operating Temperature	NMOT	[°F]	109±5.4 (43±3°C)

#### **PROPERTIES FOR SYSTEM DESIGN**

Maximum System Voltage $V_{\text{sys}}$	[V]	1000 (IEC)/1000 (UL)	Safety Class	11	
Maximum Series Fuse Rating	[A DC]	20	Fire Rating	C (IEC)/TYPE 2 (UL)	
Max. Design Load, Push / Pull <sup>3</sup>	[lbs/ft2]	75 (3600 Pa)/33 (1600 Pa)	Permitted Module Temperature	-40°F up to +185°F	
Max. Test Load, Push / Pull <sup>3</sup>	[lbs/ft <sup>2</sup> ]	113 (5400Pa)/50 (2400Pa)	on Continuous Duty	(-40°C up to +85°C)	
<sup>3</sup> See Installation Manual					

## **QUALIFICATIONS AND CERTIFICATES**

## **PACKAGING INFORMATION**

UL 1703, CE-compliant, IEC 61215:2016,	Number of Modules per Pallet	29
IEC 61730:2016, Application Class II	Number of Pallets per 53' Trailer	26
	Number of Pallets per 40' HC-Contai	ner 22
	Pallet Dimensions (L×W×H)	81.9 × 45.3 × 46.7 in (2080 × 1150 × 1190 mm)
UL 1703 (254141)	Pallet Weight	1635lbs (742kg)

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

#### Hanwha Q CELLS America Inc.

400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748-5996 | EMAIL inquiry@us.q-cells.com | WEB www.q-cells.com/na