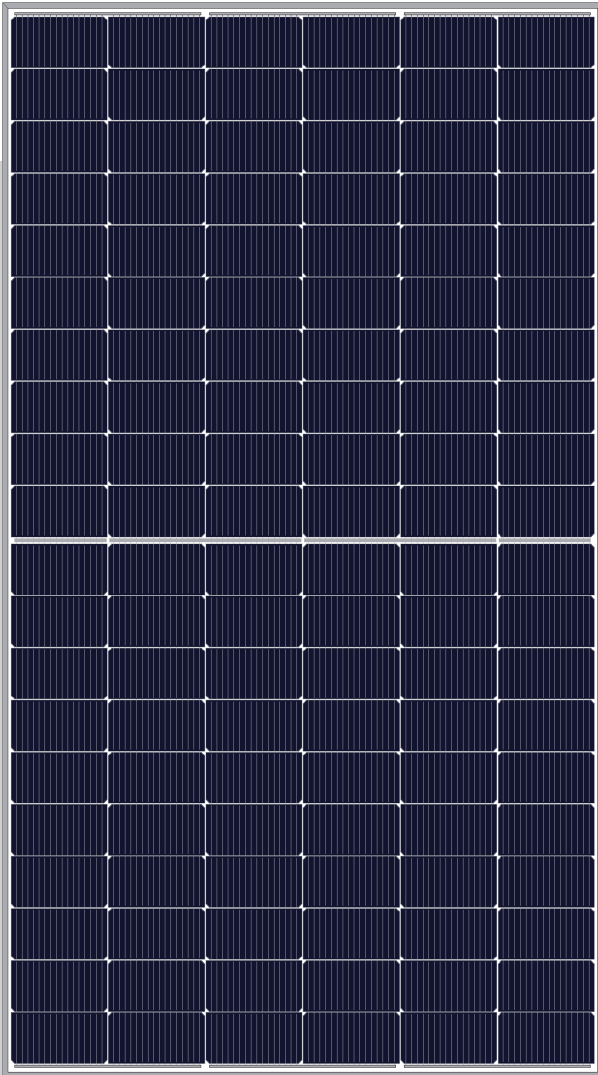


## ALPS60D30-TP

### 480-510W

High performance N-type  
Dual Glass Bifacial Solar Module



#### European Quality

Manufactured in the EU with the highest quality standards and advanced technology.

#### Exceptional Efficiency

Delivers superior energy yield even in low-light or high-temperature conditions.

#### Reliable Durability

Engineered with premium tempered glass and reinforced frames for lasting reliability.

#### N-Type with Low LID

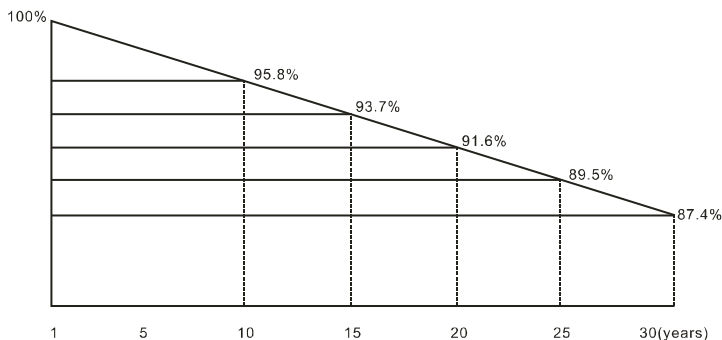
Advanced N-type cells minimize Light-Induced Degradation (LID) for performance stability.

#### Unmatched Warranty

30-year performance and 25-year product coverage surpass industry norms.

**30 YEAR** Linearity power and output warranty

**25 YEAR** Excellent products material and process warranty



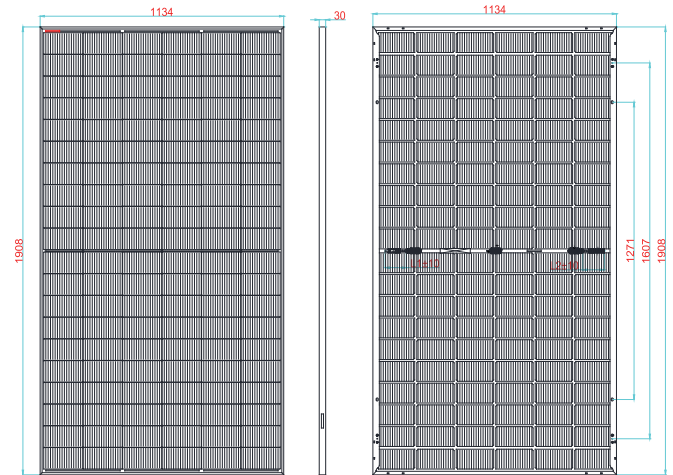
#### Comprehensive Certificates



- IEC 61215, IEC 61730, UL61730
- ISO 9001: 2015 / Quality Management System
- ISO 14001: 2015 / Environmental Management System
- ISO 45001: 2018 / Occupational Health And Safety

**MECHANICAL PROPERTIES**

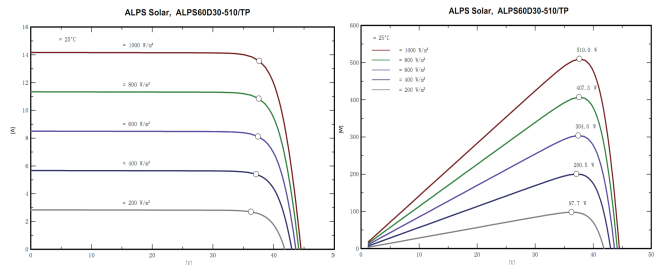
Solar Cells	182 N-type
Number of Cells	120(6×20)
Module Dimensions	1908×1134×30 mm
Weight	26kg
Cable Cross Section Size	4mm <sup>2</sup> (IEC),12AWG(UL)
Junction Box	IP68, 3diodes
Connector	MC4 / EVO 2A
Cable Length(Including Connector)	290mm
Front Glass/Back Glass	2.0mm/2.0mm (White Grid Glass)
Packaging information	36pcs/Pallet,864pcs/40HQ Container



**WORKING PARAMETERS**

Maximum System Voltage	1500V DC (IEC)
Operational Temperature	-40°C~+85°C
Maximum Series Fuse Rating	30A
Maximum Static Load, Front	5400 pa
Maximum Static Load, Back	2400 pa
NOCT	45±2°C
Safety Class	Class A

**CHARACTERISTICS**



**ELECTRICAL DATA (STC&BNPI)**

Model	ALPS60D30-480/TP		ALPS60D30-485/TP		ALPS60D30-490/TP		ALPS60D30-495/TP		ALPS60D30-500/TP		ALPS60D30-505/TP		ALPS60D30-510/TP	
	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI
Rated Maximum Power (Pmax) [W]	480	532	485	537	490	543	495	548	500	554	505	560	510	565
Maximum Power Voltage (Vmp) [V]	36.35	36.45	36.55	36.65	36.75	36.85	36.95	37.05	37.15	37.25	37.35	37.45	37.55	37.65
Maximum Power Current (Imp) [A]	13.20	14.59	13.27	14.66	13.33	14.73	13.40	14.80	13.46	14.87	13.52	14.94	13.58	15.01
Open Circuit Voltage (Voc) [V]	43.30	43.4	43.50	43.6	43.70	43.8	43.90	44.0	44.10	44.2	44.30	44.4	44.50	44.6
Short Circuit Current (Isc) [A]	13.81	15.31	13.87	15.37	13.93	15.43	13.99	15.49	14.05	15.55	14.11	15.61	14.17	15.67
Module Efficiency [%]	22.18		22.42		22.65		22.88		23.11		23.34		23.57	
Power Tolerance	0~+3%													
Temperature Coefficient of Isc	+0.044%/°C													
Temperature Coefficient of Voc	-0.250%/°C													
Temperature Coefficient of Pmax	-0.290%/°C													
Standard test environment	STC:Irradiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5 BNPI: Irradiance: front 1000W/m, rear 135W/m2, Cell Temperature 25°C, AM=1.5													

Note:Continuous innovation and product upgrades may result in changes to specifications. These parameters are intended for comparison between different models only.

**BIFACIAL OUTPUT-BACKSIDE POWER GAIN**

Model	ALPS60D30-480/TP		ALPS60D30-485/TP		ALPS60D30-490/TP		ALPS60D30-495/TP		ALPS60D30-500/TP		ALPS60D30-505/TP		ALPS60D30-510/TP		
	5%	10%	20%	5%	10%	20%	5%	10%	20%	5%	10%	20%	5%	10%	20%
Power Output (W)	504	528	576	509	534	582	515	539	588	520	550	600	525	556	606
Module Efficiency	23.29%	24.40%	26.62%	23.54%	24.66%	26.90%	23.78%	24.91%	27.18%	24.02%	25.17%	27.45%	24.26%	25.67%	28.01%

Note:The information included in this PV module datasheet is subject to change without any notice and is provided for informational purposes only. No contractual rights are established or should be inferred because of the user's reliance on the information contained in this PV module datasheet. Please contact ALPS Solar Energy's local offices for updated product information.Thank you.