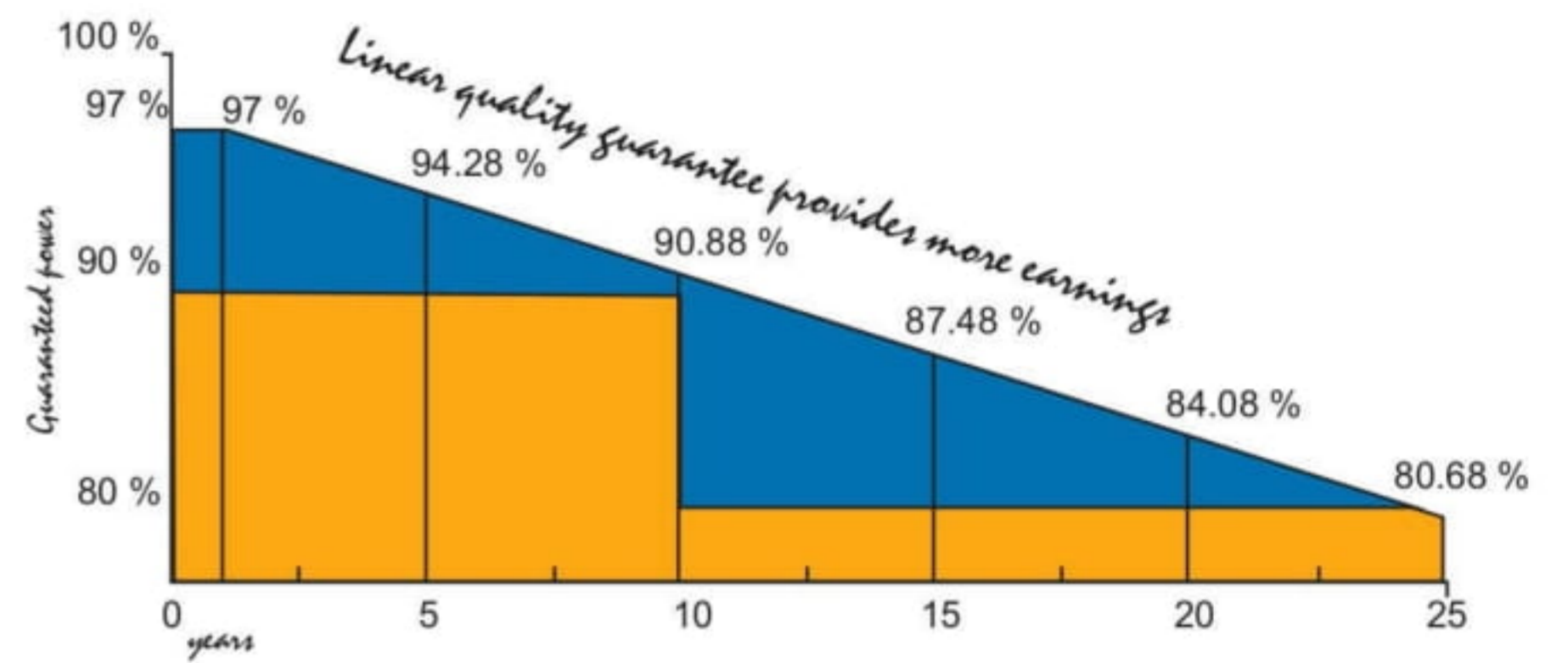


Management System  
Kalite Yönetim Sistemi

- ISO 9001 : Quality Management System  
 ISO 14001 : Environmental Management System Standard  
 OHSAS 18001 : International Occupational Health and Safety Assessment System Standard  
 ISO 10002-2004: Customer Satisfaction Management System

Product Certification  
Ürün Sertifika Standartları

- IEC 61215 (New Edition) 1500 VDC  
 IEC 61730 (New Edition)  
 IEC 61701 (Salt Mist Corrosion)  
 IEC 62716 (Amonia Corrosion)  
 IEC 62804 (Potential Induced Degradation)



Product Quality &  
Process Guarantee



Linear Power  
Guarantee



Testing  
Laboratory



## Structural Characteristics

Module dimensions	2384 x 1303 x 35 mm
Weight	38 kg
Cell	Monocrystal Half Cut Cell 210x105mm(132 Cells)
Front/Back Glass	2.0 mm AR tempered glass, low iron
Frame	Anodized aluminum alloy
Junction Box	IP68
Output Wire	4.0 mm <sup>2</sup> , wire length: 300 mm
Connector	MC4 Connector
Mechanical Load	5400 Pa



## Electric Characteristics (STC)

Model Of Modules	645-132M	650-132M	655-132M	660-132M	665-132M
Maximum power - $P_{max}$ (W)	645	650	655	660	665
Open-Circuit Voltage - $V_{oc}$ (V)	45.50	45.68	45.87	46.03	46.24
Short-Circuit Current - $I_{sc}$ (A)	18.58	18.63	18.68	18.73	18.78
Maximum Power Voltage - $V_{mp}$ (V)	37.52	37.72	37.91	38.08	38.28
Maximum Power Current - $I_{mp}$ (A)	17.19	17.23	17.28	17.33	17.37
Module Efficiency - $\eta_m$ (%)	20.8	20.9	21.1	21.2	21.4

STC: Irradiance 1000 W/m<sup>2</sup>, 25°C, AM 1.5

Power Tolerance (W)	(0,+5)
Maximum system voltage (V)	1500 V
Maximum rated fuse current (A)	35

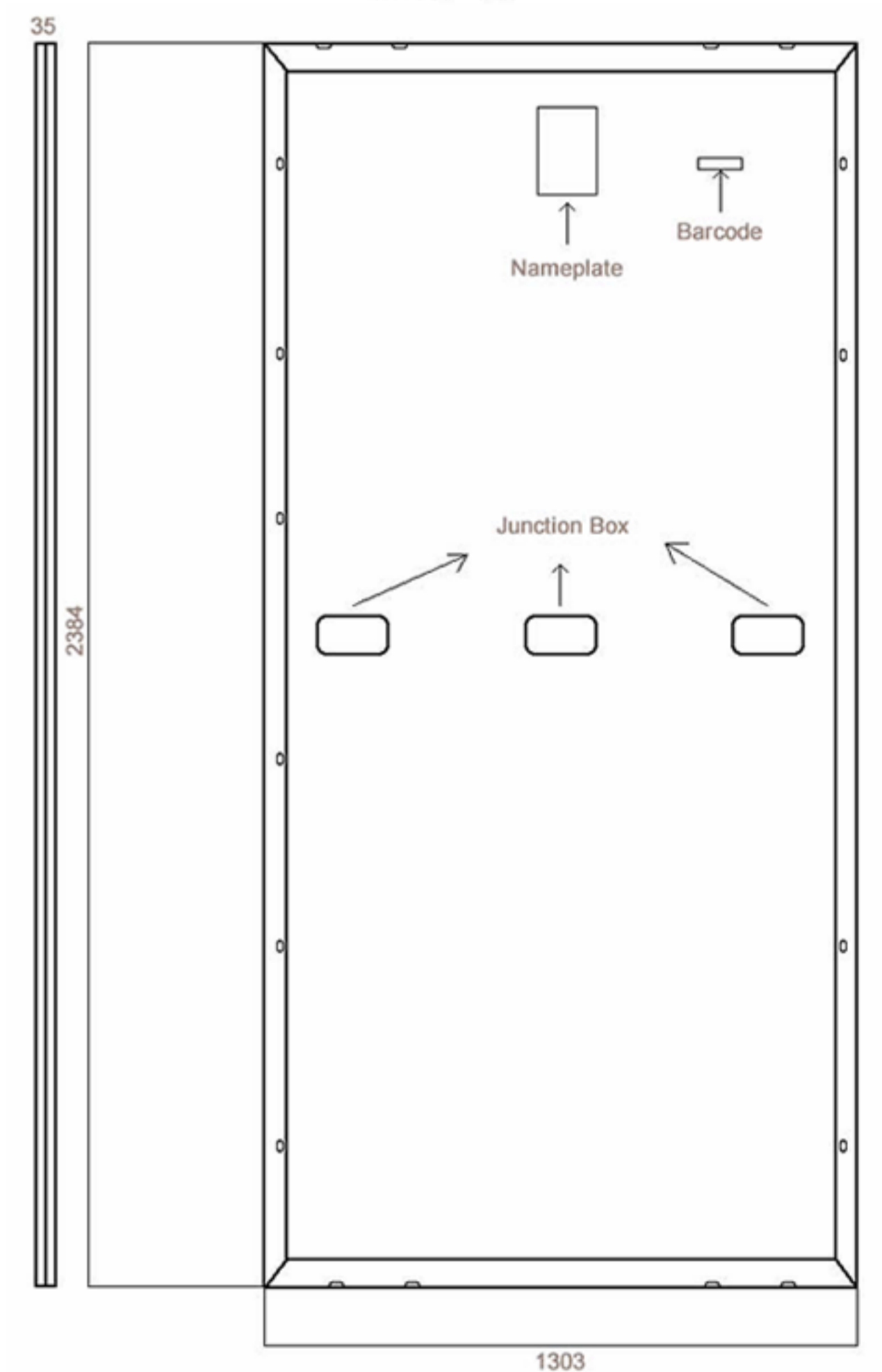
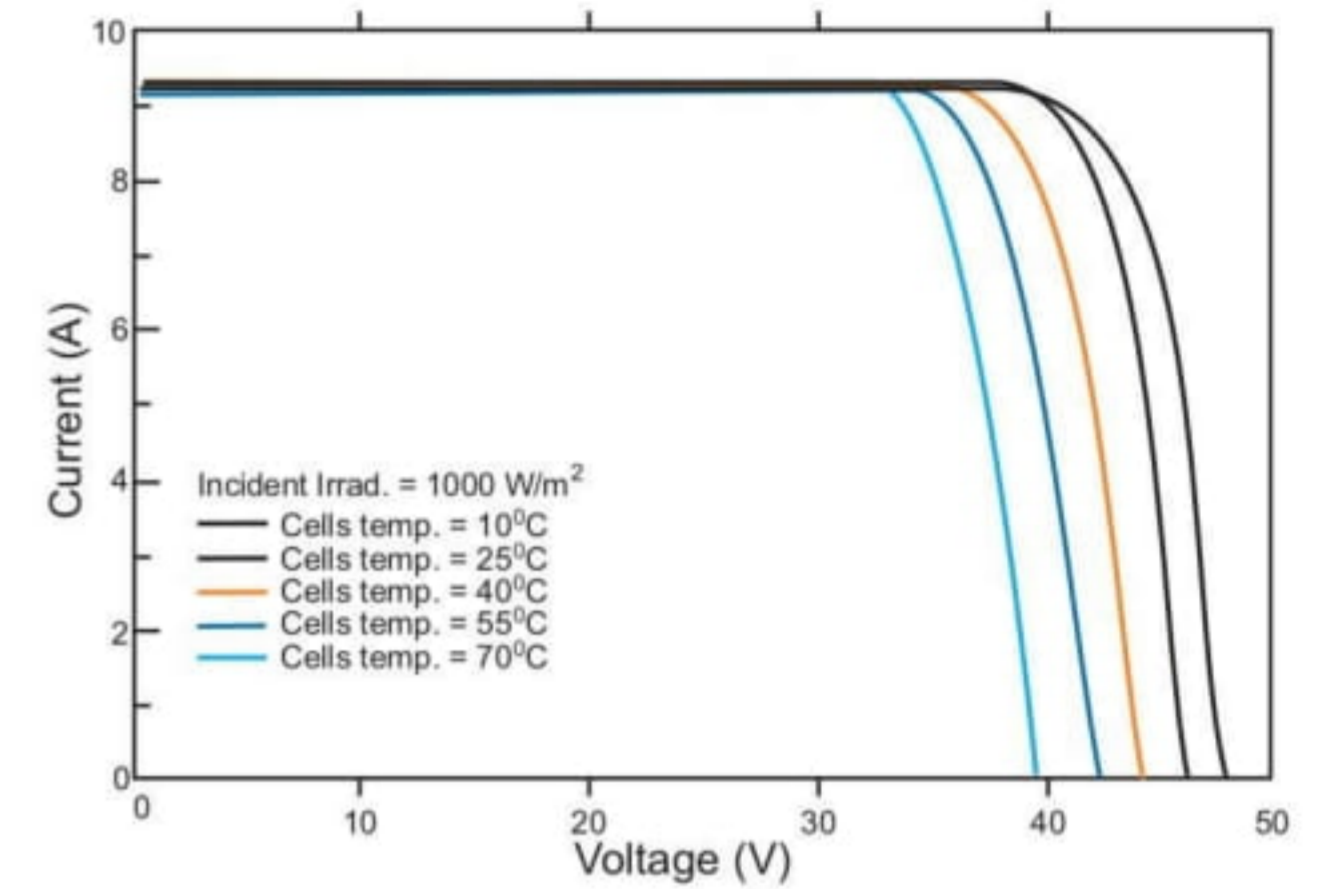
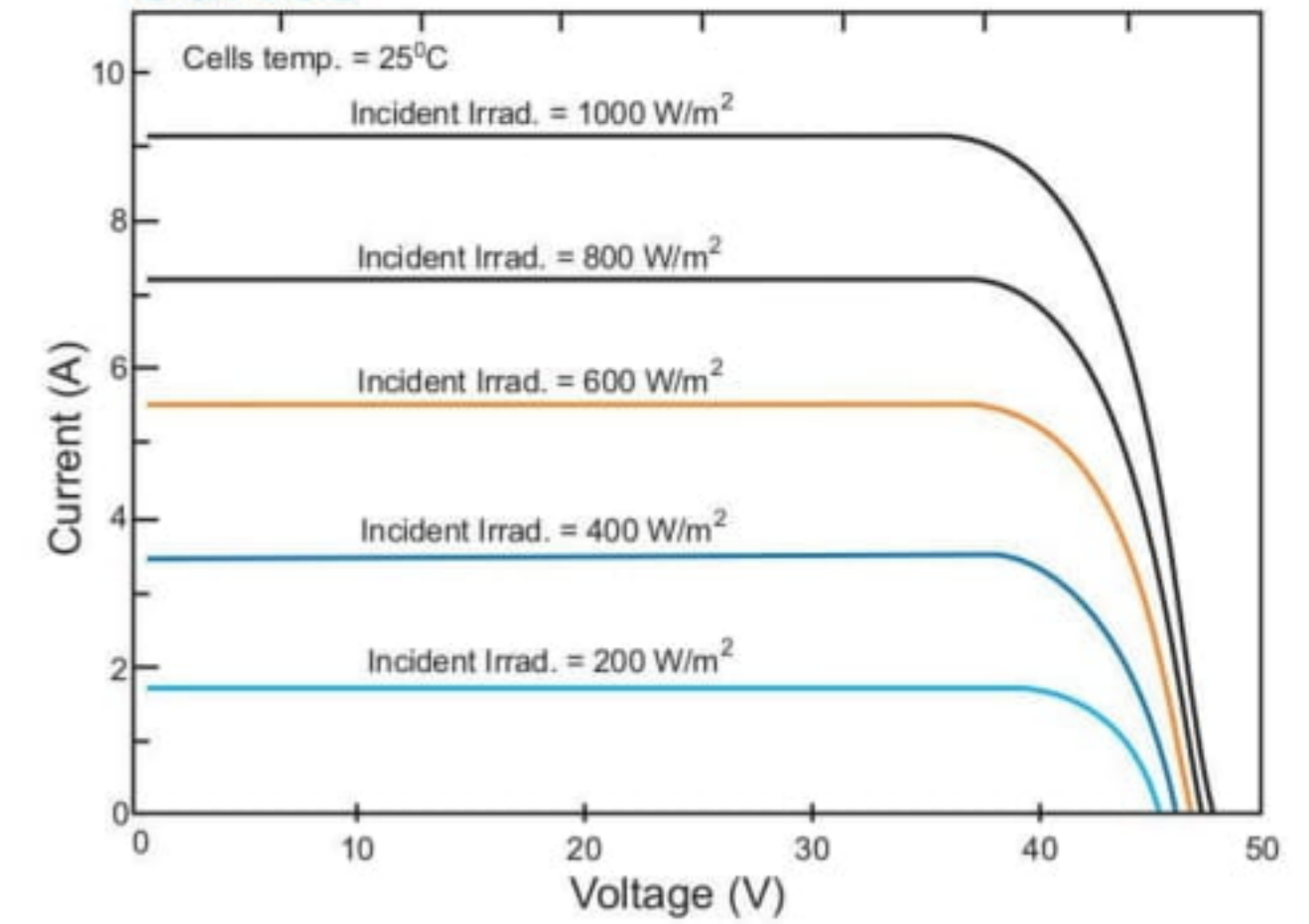
## Temperature Characteristics

Temperature coefficient at maximum power	-0,373 (%/°C)
Temperature coefficient at open - circuit voltage	-0,307 (%/°C)
Temperature coefficient at short - circuit current	+0,050 (%/°C)
Operating temperature	-40~+85 °C
Rated operating temperature of cells	45±2 °C

## Packaging Configuration

Container	40 HQ
Quantity/Pallet	31
Pallets/Container	18
Quantity/Container	558

## Curves



## Safety



Resistance to salt-spray corrosion (IEC61701, certified to SGS test standart)



Resistance to ammonia corrosion (IEC62716, certified to SGS test standart)



Fire safety (Class C, certified to SGS test standards)

## Reliability



Resistance to power attenuation passed SGS system voltage endurance test

## High performance



Excellent power output of modules in low light environment



100% double EL test enabling remarkable reduction of hidden crack rate of modules