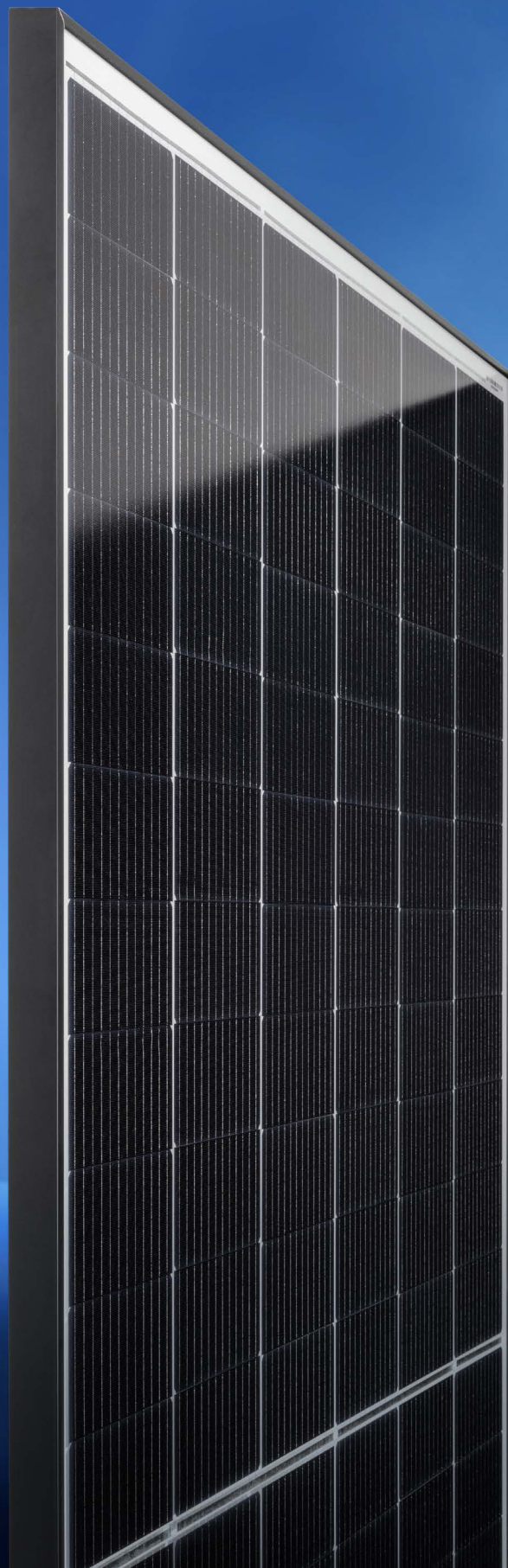


# Q.ANTUM NEO

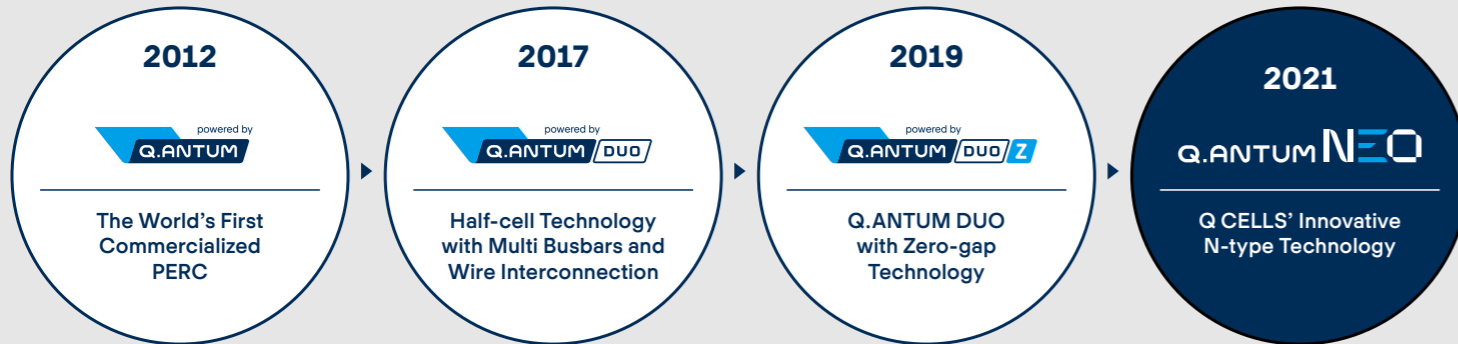
Q CELLS' Innovative N-type Cell Technology



**Q CELLS**

# Q.ANTUM NEO

GET READY FOR A NEW ERA OF SOLAR



Unstoppable Evolution of Q.ANTUM

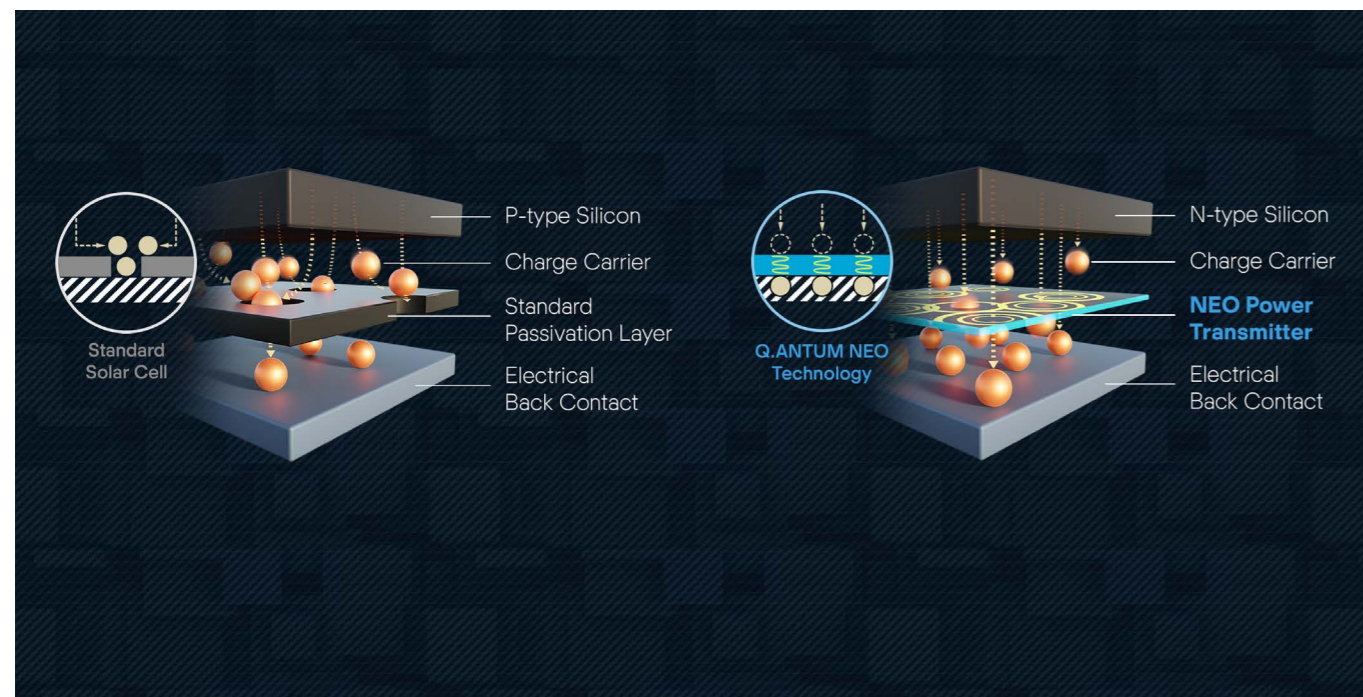
## MORE EFFICIENCY THROUGH NEO POWER TRANSMITTER

### Standard Cells (P-type, PERC)

Standard Cells (P-type, PERC) use a passivation layer with small holes for electrical interconnection of the cell rear side. Passivation is reduced in the contact area which limits the maximum efficiency.

### Q.ANTUM NEO Cells (N-type)

Within Q.ANTUM NEO solar cells (N-type), passivation layer and electrical interconnection functionality are integrated in the NEO Power Transmitter layer. This allows for a full area passivation and full area contact at the same time thus overcoming the PERC limitations.



## Q CELLS UNIQUE YIELD SECURITY

Protection of solar cells from critical degradation effects.

### Anti PID Technology (APT)

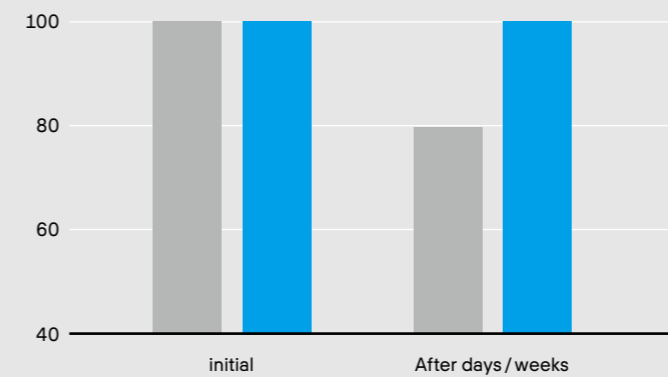
Potential Induced Degradation (PID) can lead to significant power loss for both P-type and N-type cells. The APT of Q.ANTUM NEO effectively protects the solar cells and secures high energy yield in the long-term.

### Anti LeTID Technology (ALT)

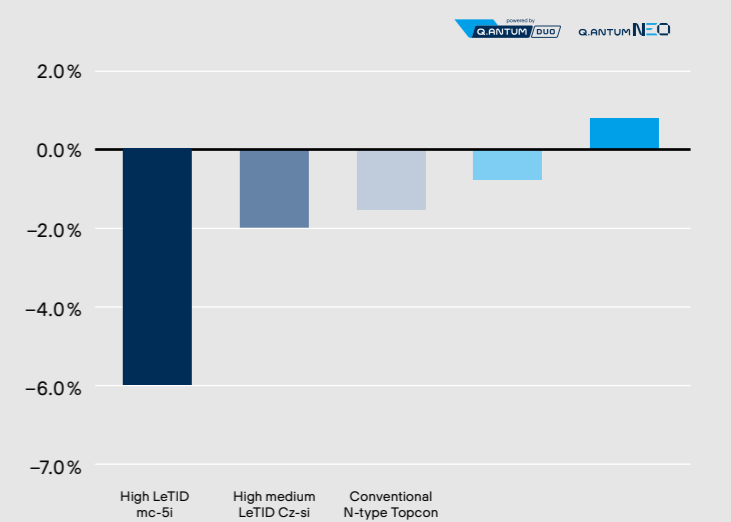
Not only in P-type, but also in N-type, the power of solar cells can significantly decrease due to Light and Elevated Temperature Induced Degradation (LeTID) effect. As the first company to observe LeTID effects and to devise a solution to suppress LeTID in 2015, Q CELLS can secure high reliability against LeTID.

### Outdoor performance at -1500 V

power [%]

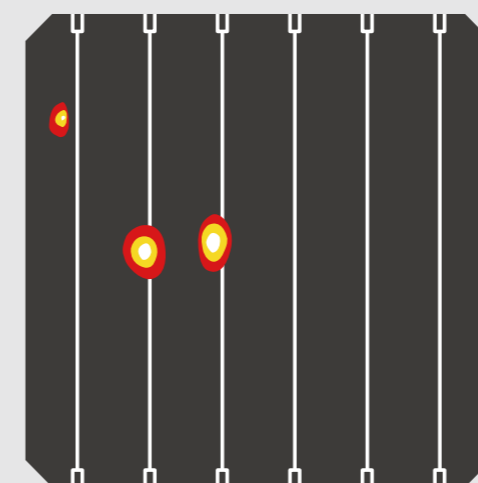


■ conventional N-type  
■ Q.ANTUM NEO



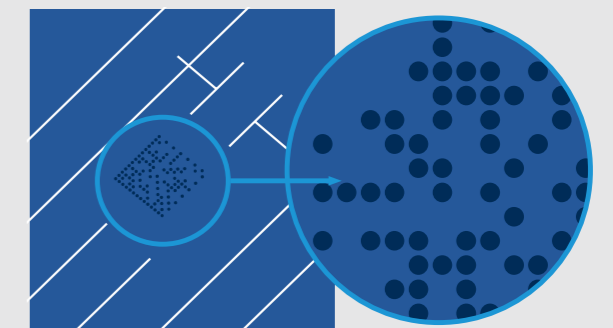
### Hot-Spot Protect (HSP)

In order to prevent hot spots in cells, we inspect the solar cells with various ways, such as infrared camera scanning, since 2008.



### Tra.Q™

With Tra.Q™ laser marking, every single cell that we make is traced and monitored throughout the entire production process, enabling big data analysis and assuring high reliability and quality. Q CELLS is the only solar manufacturer tracing and monitoring every single cell that we make.





# QUALITY MANAGEMENT

Considering that solar modules have long **lifespan over 25 years**, quality is one of the most important factors, when you select the brand and product. All Q CELLS' products, engineered in Germany, pass strict quality program.

## OUTSTANDING WARRANTY

With the confidence in quality, Q CELLS provides inclusive 25-year product warranty and 25-year linear performance warranty to bring our customers peace of mind.



## THE WORLD'S FIRST COMPANY TO PASS QCPV

Q CELLS is the first solar module manufacturer in the industry to pass TÜV Rheinland's new Quality Controlled PV (QCPV) certification, the most thorough testing program in the industry.



### Uncompromising Testing Standards

With our solar modules passing over 40 individual tests, Q CELLS consistently raises the bar for quality control.

### Onsite Production Monitoring

QCPV is the only testing program in that an independent expert from TÜV Rheinland continuously monitors the quality and monitoring measures at Q CELLS sites, in order to be able to guarantee product stability.

### Components and Materials Audits

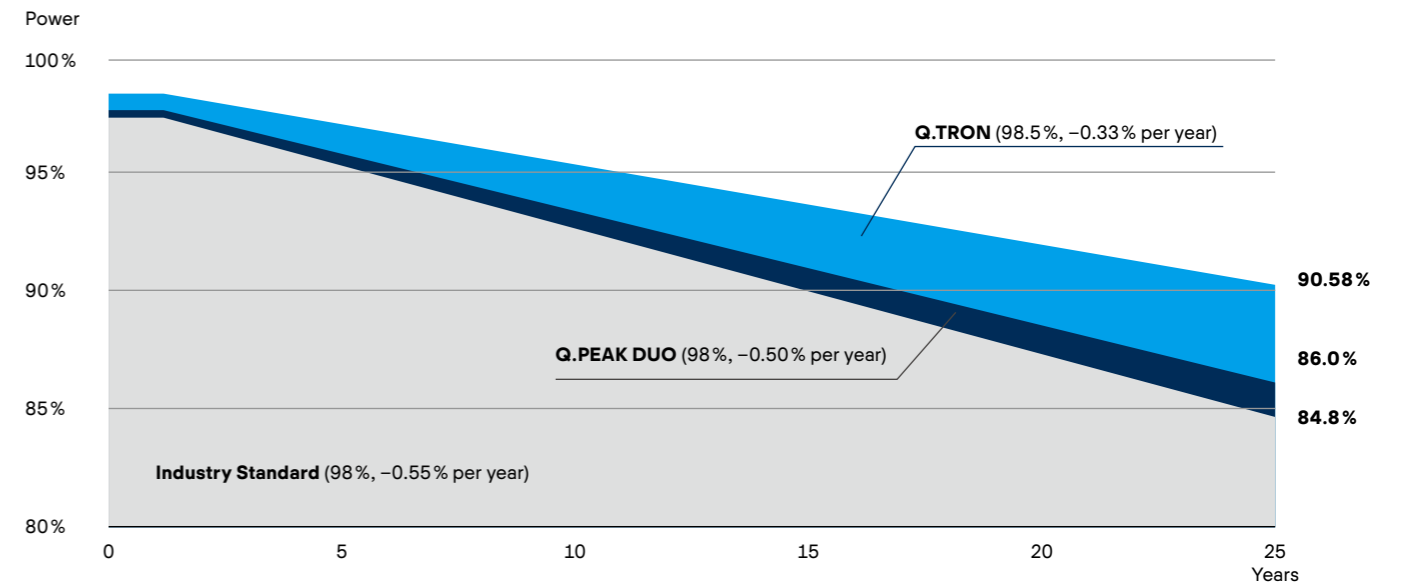
To immediately detect quality fluctuations at the earliest stages in manufacturing, Q CELLS regularly checks components and materials using methods made to find defects.



# Q.TRON SERIES

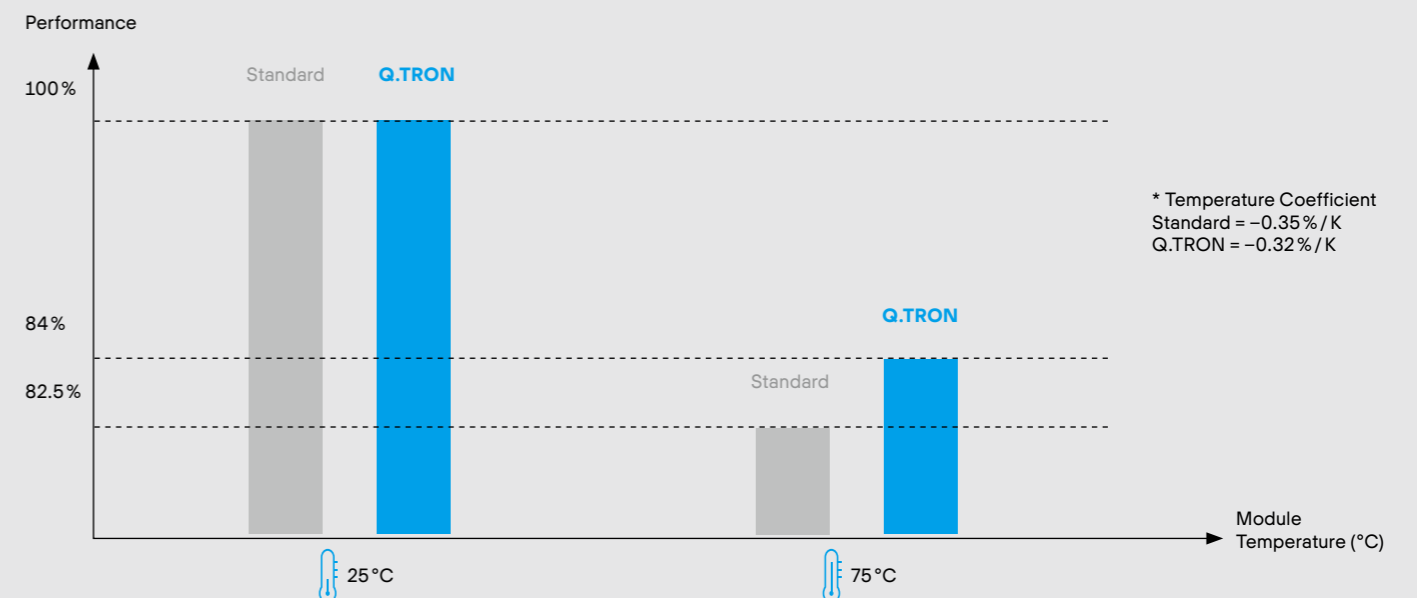
Q.TRON is highly efficient N-type solar module based on Q.ANTUM NEO Technology. Thanks to its high efficiency of up to 22.6%, Q.TRON is a suitable solution for limited area such as rooftop on residential, commercial and industrial buildings.

## POWERFUL N-TYPE SOLAR MODULES WITH Q.ANTUM NEO TECHNOLOGY



## TOLERANCE TO HIGH TEMPERATURE

The nominal power of a solar modules is defined at 25°C. Power production of a solar module decreases with increasing temperature. For this reason, the temperature coefficient is an important parameter for the energy harvest. Q.TRON with Q.ANTUM NEO maintains its high performance under extremely high temperature.





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