

## Leading - edge Technology

### Excellent Performance

- ▶ Maximum efficiency of 98.8%, CEC efficiency of 98.5%
- ▶ 1000VDC input special for large-scale plant application
- ▶ Dual independent MPPT and advanced MPPT algorithms lead to optimal energy harvesting
- ▶ Consistent and stable performance across entire input voltage and output power range

### High Reliability

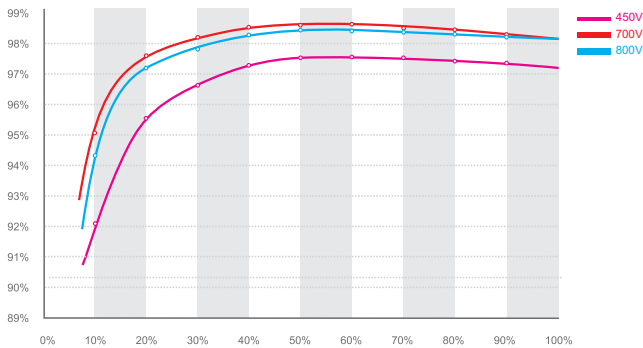
- ▶ String level monitoring
- ▶ AC power supply enable remote monitoring, upgrading
- ▶ Advanced thermal design, with variable speed fans
- ▶ Compact design, easy installation and maintenance procedure
- ▶ Comprehensive protection for IGBTs, overvoltage, short-circuit, overload, overheat, etc
- ▶ Anti-PIID, AC/DC SPD, PV +/- Fuse
- ▶ UL 1699B and Rule 21 Compliant

### Flexible Design

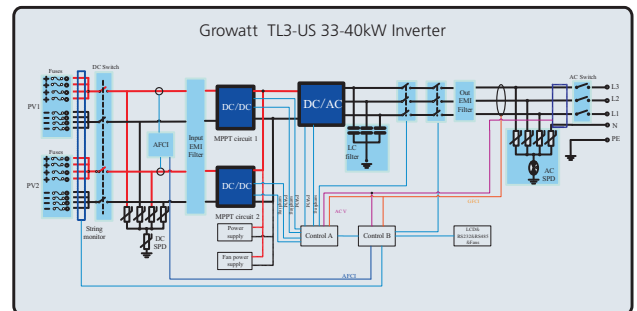
- ▶ Maximum DC/AC ratio to 1.5
- ▶ 0-90 degree installation angle
- ▶ 50 units in parallel per transformer
- ▶ Seperate wiring box design
- ▶ Integrated DC, AC disconnects
- ▶ Wide MPPT range for flexible string sizing



Growatt 33000TL3-US efficiency



Growatt 33-40K TL3-US topology



Datasheet	Growatt 33000 TL3-US	Growatt 36000 TL3-US	Growatt 40000 TL3-US
<b>Input Data (DC)</b>			
Max. usable DC power	33700W	36750W	40800W
Max. DC voltage	1000V	1000V	1000V
Start voltage	250V	250V	250V
DC nominal voltage	695V	695V	695V
PV voltage range	200V-1000V	200V-1000V	200V-1000V
MPP voltage range (Full load)	480V-800V	520V-800V	570V-800V
Max. input current of the MPP tracker A/tracker B	36A/36A	36A/36A	36A/36A
Max. input short circuit current of the MPP tracker A/tracker B	45A/45A	45A/45A	45A/45A
Number of independent MPP trackers/ strings per MPP tracker	2/4	2/4	2/4
<b>Output (AC)</b>			
Nominal output power	33000W/36660VA	36000W/40000VA	40000W/40000VA
Nominal AC voltage	480V	480V	480V
AC voltage range	422-528VAC	422-528VAC	422-528VAC
Nominal AC grid frequency	60 Hz	60 Hz	60 Hz
AC grid frequency range	59.3-60.5 Hz	59.3-60.5 Hz	59.3-60.5 Hz
Max. output current (cos $\Phi=1$ )	44A	48A	48A
Power factor (cos $\Phi$ )	>0.99 0.8LG - 0.8LD (0.9LG - 0.9LD at full power)		
Harmonics	<3%	<3%	<3%
Grid connection type	3/NE	3/NE	3/NE
<b>Efficiency</b>			
Max. efficiency	98.8%	98.8%	98.8%
CEC-Weighted Efficiency	98.5%	98.5%	98.5%
MPPT efficiency	99.5%	99.5%	99.5%
<b>Protection Devices</b>			
DC reverse-polarity protection	yes	yes	yes
DC switch for each MPP tracker	yes	yes	yes
AC switch	yes	yes	yes
Input over voltage protection surge arrester	Class II	Class II	Class II
DC insulation measure	yes	yes	yes
AC short circuit protection	yes	yes	yes
Output over voltage protection surge arrester	Class II	Class II	Class II
String fuse type/size	yes(15A/1000VDC)	yes(15A/1000VDC)	yes(15A/1000VDC)
AFCI	yes(Compliant to UL 1699B)	yes(Compliant to UL 1699B)	yes(Compliant to UL 1699B)
String monitor	yes	yes	yes
Anti PID	yes	yes	yes
<b>General Data</b>			
Dimensions (W / H / D) in inch	435/790/265mm 17.1/31.1/10.4inch	435/790/265mm 17.1/31.1/10.4inch	435/790/265mm 17.1/31.1/10.4inch
Weight	50kg/110.2lb	50kg/110.2lb	50kg/110.2lb
Operating temperature range	-25...+60°C/(-13...+ 140°F)	-25...+60°C/(-13...+ 140°F)	-25...+60°C/(-13...+ 140°F)
Noise emission	≤50 dB(A)	≤50 dB(A)	≤50 dB(A)
Relative Humidity	0~100%	0~100%	0~100%
Altitude	≤2000m/6560ft	≤2000m/6560ft	≤2000m/6560ft
Self Consumption night	<6 W(AC Power Supply)	<6 W(AC Power Supply)	<6 W(AC Power Supply)
Topology	Transformerless	Transformerless	Transformerless
Cooling concept	Fan Cooling	Fan Cooling	Fan Cooling
Enclosure	NEMA 3R	NEMA 3R	NEMA 3R
<b>Features</b>			
Display	Graphic	Graphic	Graphic
Interface: RS232/RS485/WIFI/Ethernet/GPRS	yes/yes/opt/opt /opt	yes/yes/opt/opt /opt	yes/yes/opt/opt /opt
Warranty:5years/10years/15years	yes/yes/opt	yes/yes/opt	yes/yes/opt

**Certificates and Approvals**

UL1741, UL1741 SA, UL1998, UL 508C,IEEE1547,FCC part 15(class B),CSA C22.2 No.107.1,CSA C22.2 NO.14