

Project Name:	
Type:	

QM40 Series

High Power Constant Current LED Driver

PRODUCT FEATURE

- Compact size maximizes design flexibility
- Low flickering - less than 10% up to 120Hz
- No-load power consumption less than 0.5W
- 4 in 1 dimming TRIAC / ELV / 0-10V / PWM
- Meeting CEC Title 24, JA-8.3.3 requirements
- Dimming percentage <1% typ. All dimming methods
- Optional dimming curve - liner or progression
- CC or CV output with 4 in dimming capabilities
- Easy quick "dip switch" output programming
- Wireless communication protocol using ZigBee or Casambi - Optional
- Transient Protection



SPECIFICATIONS

Input Range	: 110 - 277VAC / 0.30 - 0.15A / 47 - 63Hz
DC output Range	: Refer to model selection table
Efficiency	: 87% typical
Power Factor	: > 0.98 at full load, 115VAC or 230VAC
Output Current Regulation	: ±5%
Protection	: OCP, SCP, OVP - Auto recovery
Surge Rating	: 2.5KVA
Dimming	: Compatible with TRIAC / ELV / 0-10V / PWM
PWM dimming Signal	: 500Hz - 10Khz; Min. 10V amplitude
Operation Temp.	: -30°C - +50°C, Tc : 90°C
Storage Temp.	: -40°C - +85°C
Humidity (Non-Condensing) :	5% to 95%
Vibration Frequency	: 5 to 50Hz
MTBF	: >100,000 Hours, Full load, 25°C Amb., MIL-217F
Regulation Compliance	: UL8750 Supplement SF, Class P EN61347, EN55015, EN61547
Cooling	: Convection
Dimension	: 3.49" x 1.64" x 1.20" (L x W x H)

WARRANTY

- See [Limited Warranty Policy](#) for more additional information

RELATED PRODUCTS

- 🔗 [QM32 Series](#)
- 🔗 [QM50 Series](#)
- 🔗 [QM70 Series](#)
- 🔗 [QM100 Series](#)

MODEL SELECTION

MODEL NUMBER	DC OUTPUT RANGE (Vf)	MAX OUTPUT CURRENT (Ma)	Max output power (W)
QM40-U48-yyyy-XP	10 – 48VDC ^{Note 4}	1250 ^{Note 2}	40
QM40-U48-yyyy-XP (1)	10 – 48VDC ^{Note 4}	1250 ^{Note 2}	40
QM40-U24-XP	24 VDC – Constant Voltage	1660	40

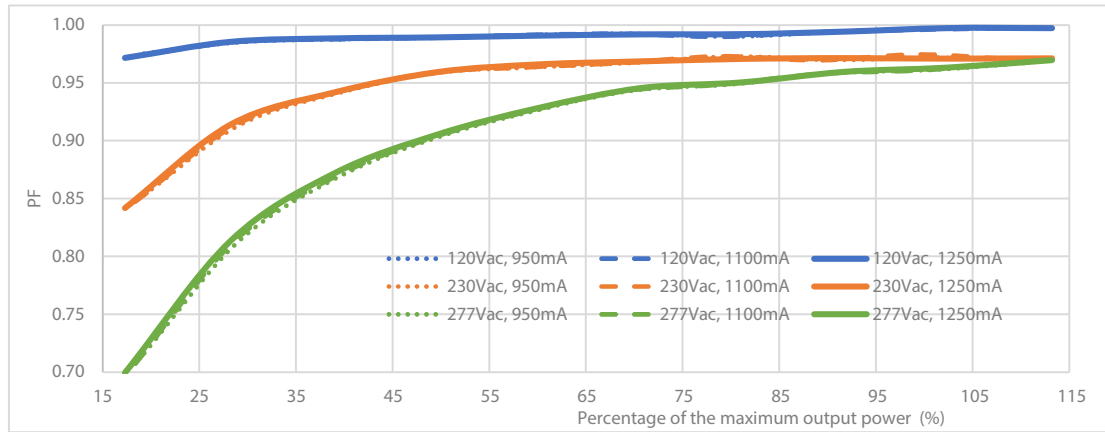
NOTE 1: "yyyy" - Standard output current is (-0850 or 1250). Please refer to output current chart;
XP: 94V-0 plastic case;

NOTE 2: Custom output current configuration available.

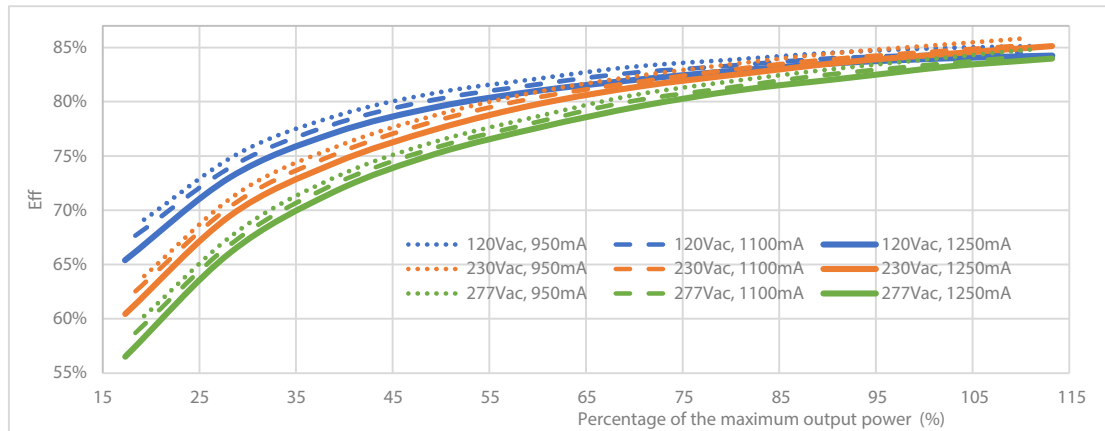
NOTE 3: "(1)", Non-AC Dim option

NOTE 4: Please refer to performance chart for more details.

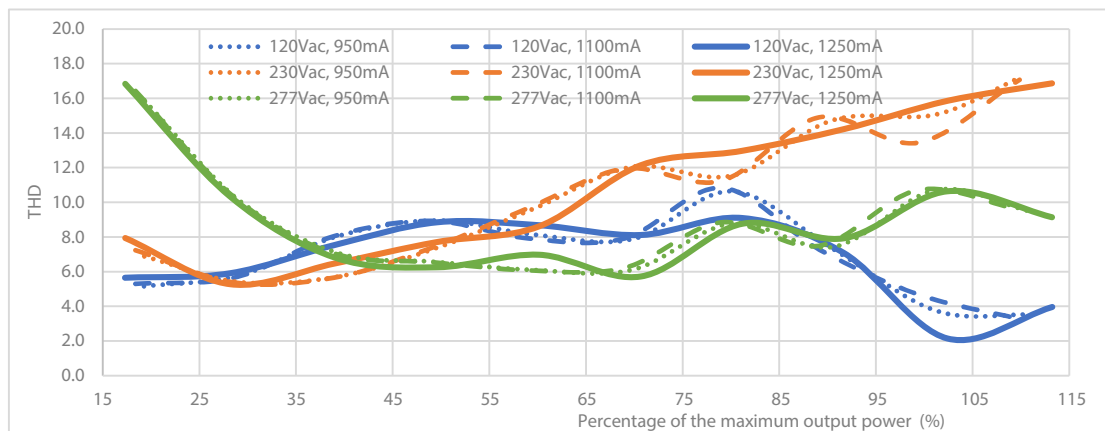
POWER FACTOR VS LOAD



EFFICIENCY VS LOAD

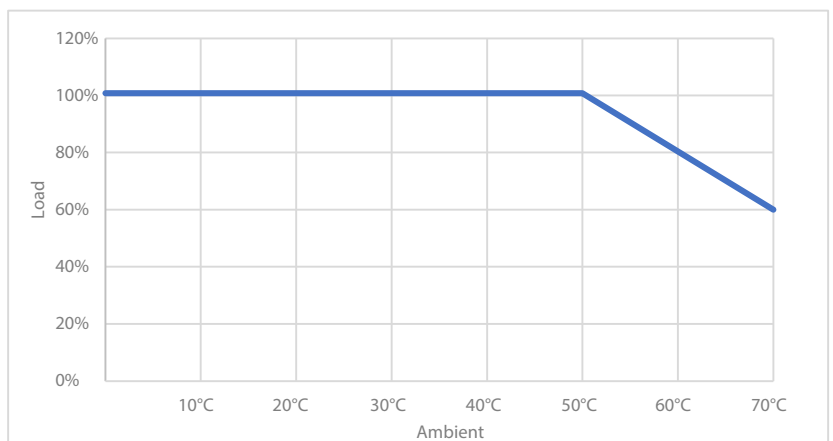


THD VS LOAD



Note: The above reports are generated using QM40-U48-1250 with forward voltage range from 7VDC to 48V

DE-RATING TEMP VS LOAD

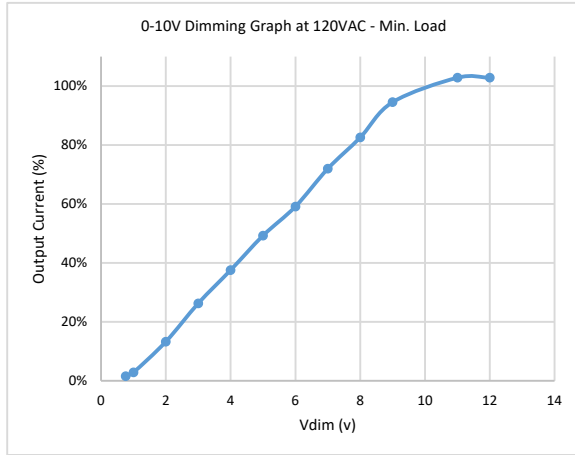


Project Name:	
Type:	

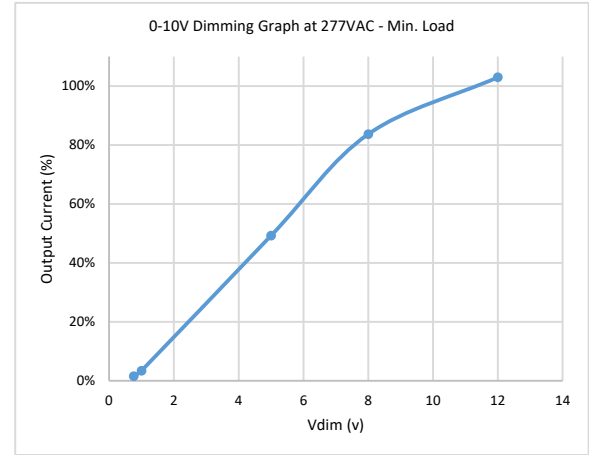
QM40 Series

High Power Constant Current
LED Driver

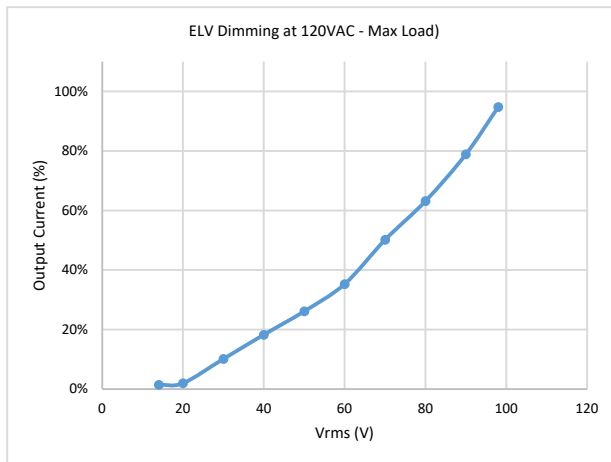
0-10V DIMMING GRAPH AT 120VAC - MIN LOAD



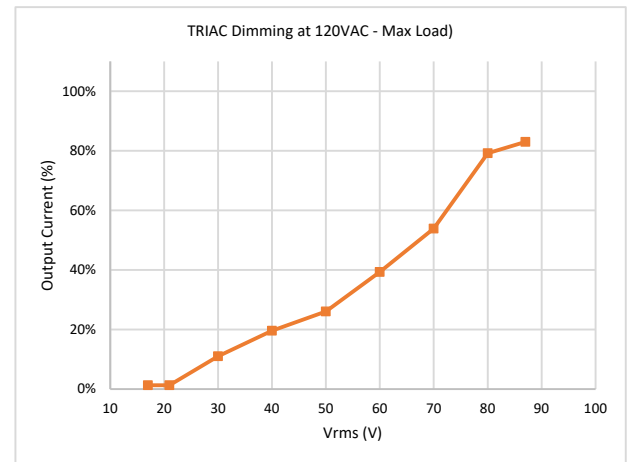
0-10V DIMMING GRAPH AT 277VAC - MIN LOAD



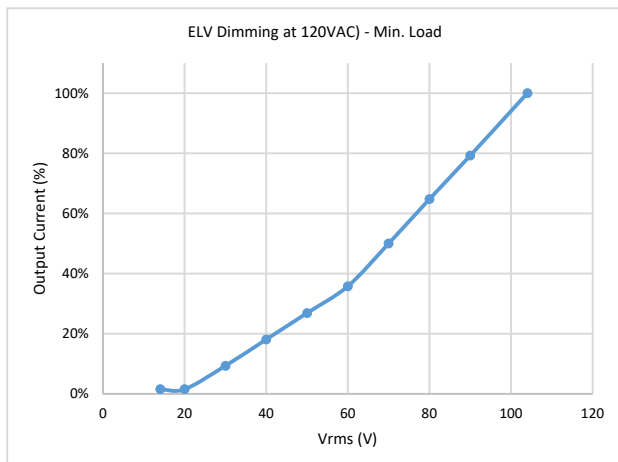
ELV DIMMING AT 120VAC - MAX LOAD



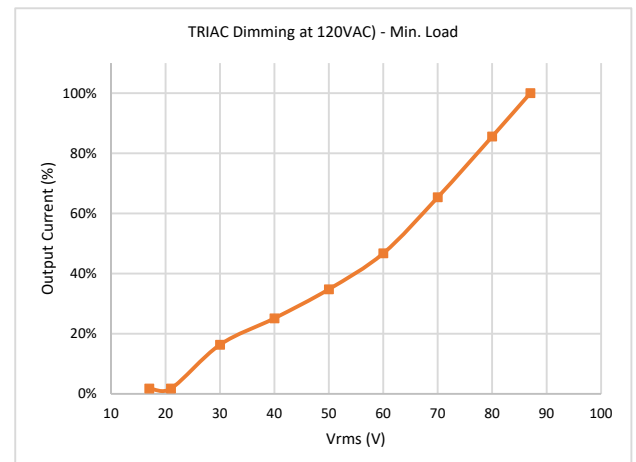
TRIAC DIMMING AT 120VAC - MAX LOAD



ELV DIMMING AT 120VAC - MIN LOAD



TRIAC DIMMING AT 120VAC - MIN LOAD

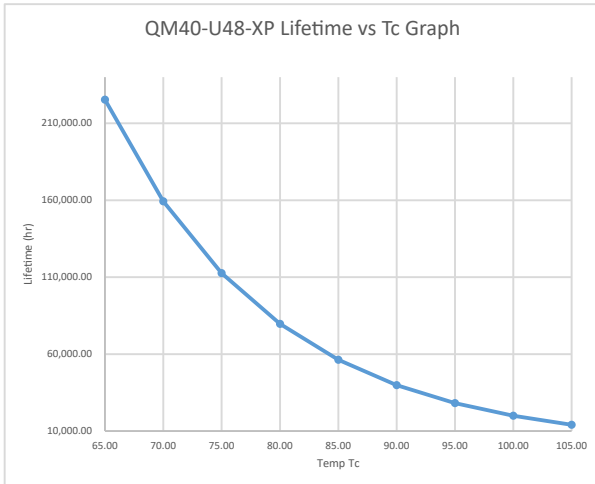


Project Name:	
Type:	

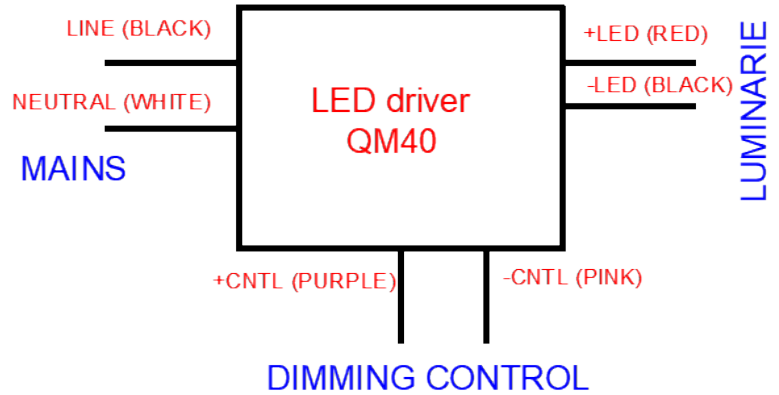
QM40 Series

High Power Constant Current
LED Driver

LIFE TIME VS AMBIENT TEMP



WIRING DIAGRAM



OUTPUT CURRENT SETTING AND LOW DIM STATUS SETTING

ACCURACY: $\pm 2.5\%$

OUTPUT (mA)	-0850			SW4
	SW1	SW2	SW3	
500	Off	Off	Off	Dim to off = Off Dim to on = On
550	On	Off	Off	
600	Off	On	Off	
650	On	On	Off	
700	Off	Off	On	
750	On	Off	On	
800	Off	On	On	
850	On	On	On	

OUTPUT (mA)	-1250			SW4
	SW1	SW2	SW3	
900	Off	Off	Off	Dim to off = Off Dim to on = On
950	On	Off	Off	
1000	Off	On	Off	
1050	On	On	Off	
1100	Off	Off	On	
1150	On	Off	On	
1200	Off	On	On	
1250	On	On	On	

MECHANICAL SPECIFICATION

CON	COLOR	OUTPUT	AWG	LENGTH
AC IN	Black	Line	19	6.5 [165] $\pm 0.5 [\pm 13]$
	White	Neutral	18	
DC OUT	Red	+V	20	
	Black	-V	20	
DIM CONTROL	Purple	Dim+	20	
	Gray	Dim-	20	

