

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
- 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
- UL8750 supplement SF, Class 2; Class P and CE compliant



## 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	20 – 48VDC	1250 <sup>Note 2</sup>	40
QM40-U48-yyyy-XP (1)	20 – 48VDC	1250 <sup>Note2</sup>	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;

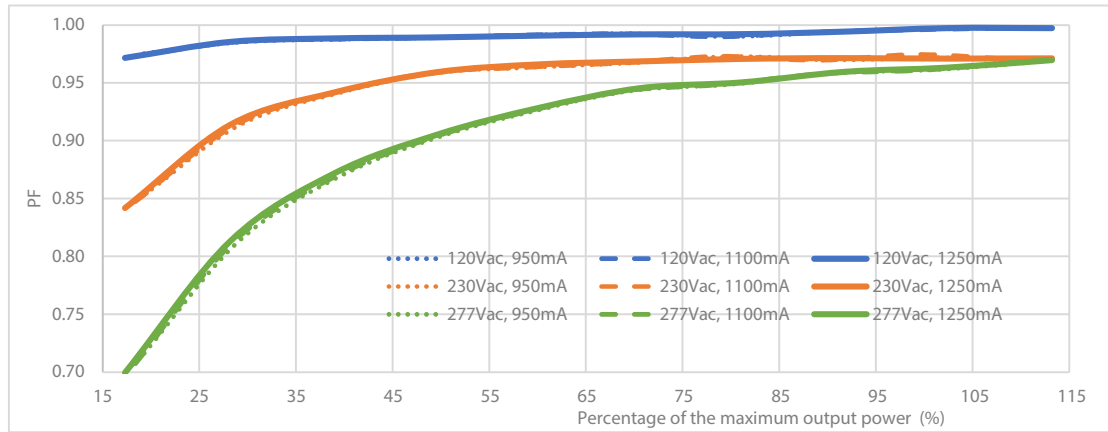
NOTE 2: Custom output current configuration available.

NOTE3: "(1)", Non-AC Dim option

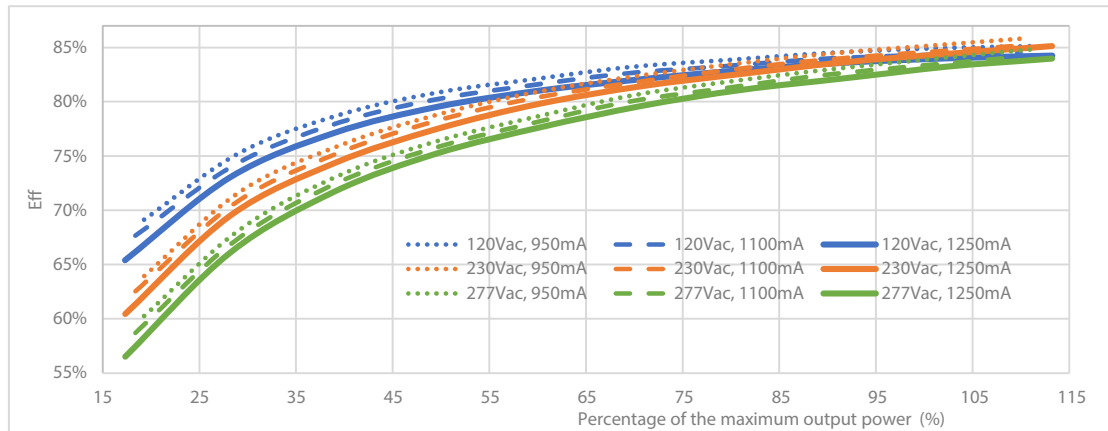
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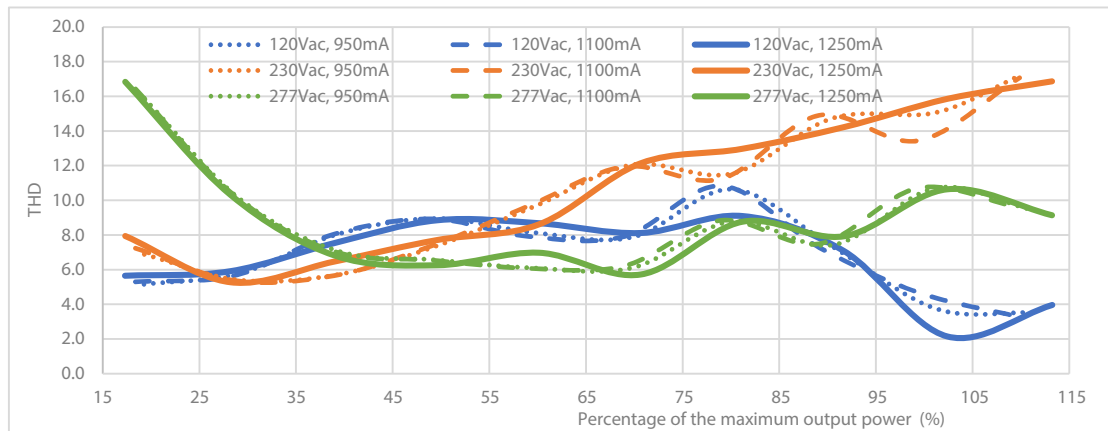
## POWER FACTOR VS LOAD



## EFFICIENCY VS LOAD

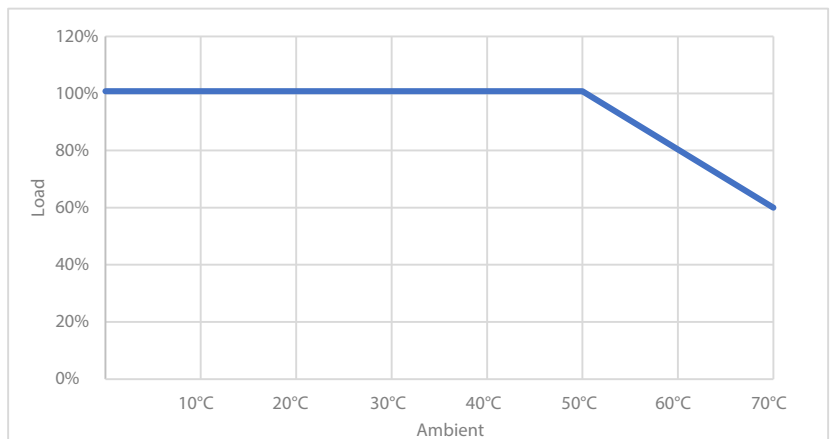


## THD VS LOAD



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

## DE-RATING TEMP VS LOAD

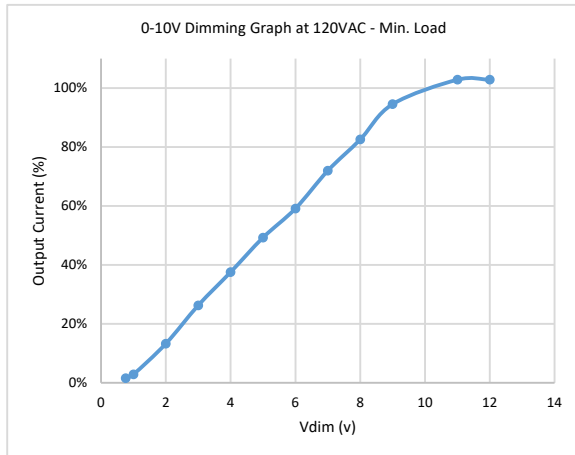


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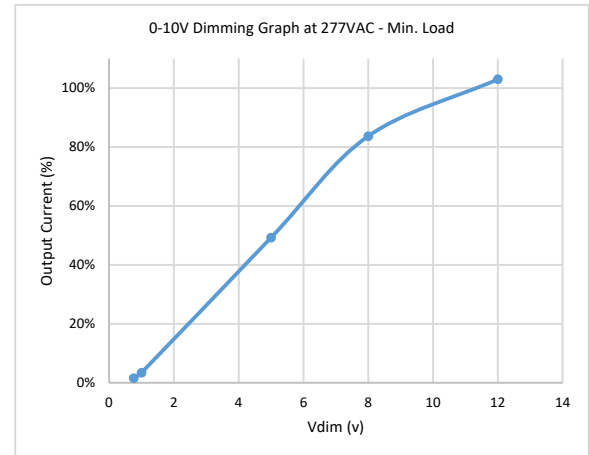
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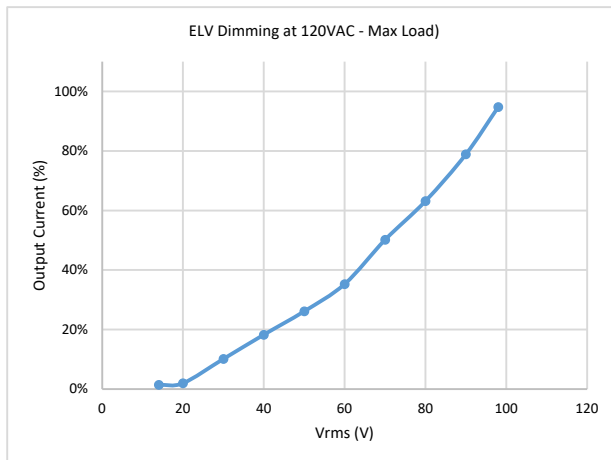
## 0-10V DIMMING GRAPH AT 120VAC - MIN LOAD



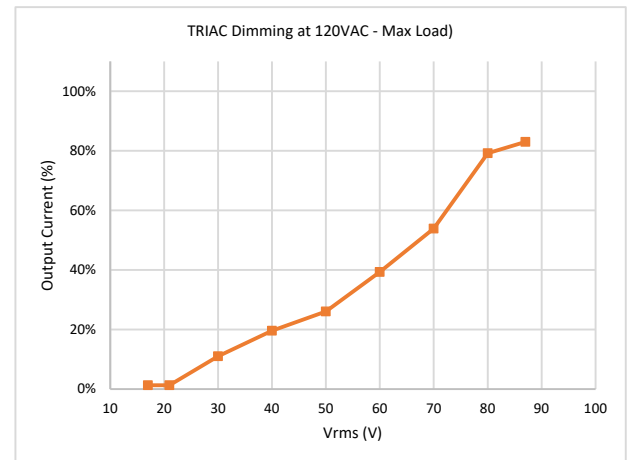
## 0-10V DIMMING GRAPH AT 277VAC - MIN LOAD



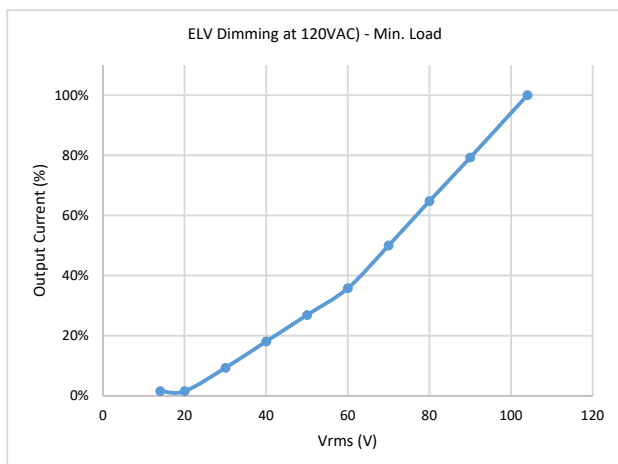
## ELV DIMMING AT 120VAC - MAX LOAD



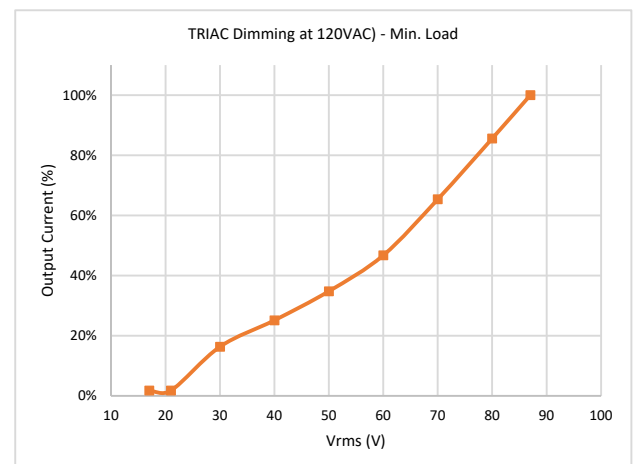
## TRIAC DIMMING AT 120VAC - MAX LOAD



## ELV DIMMING AT 120VAC - MIN LOAD



## TRIAC DIMMING AT 120VAC - MIN LOAD

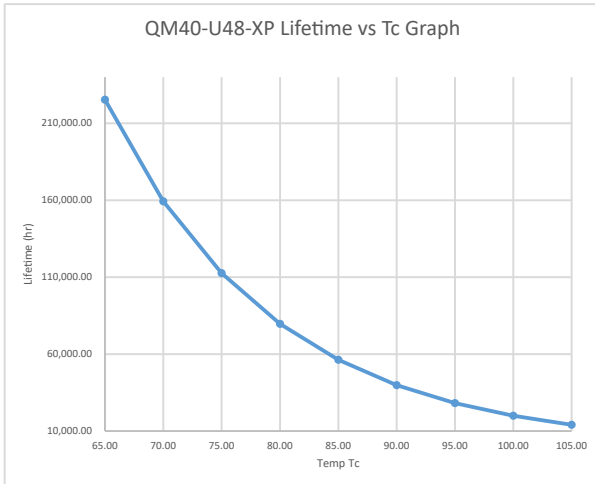


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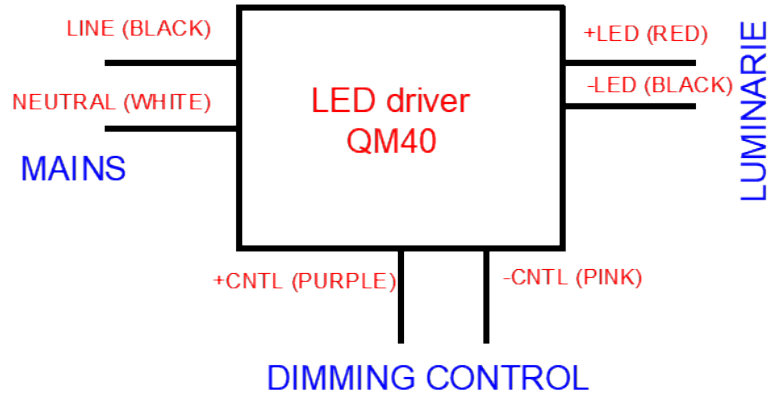
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## LIFE TIME VS AMBIENT TEMP



## 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
AC IN	Black	Line
	White	Neutral
DC OUT	Red	+V
	Black	DND
DIM CONTROL	Purple	Dim+
	Pink	Dim-

