

Mustang™ Series

XEL-051R LED Driver Family



5~55W, 1% Dimming, Programmable Driver

Nominal Input Voltage (Vin)	Family Output Power Range (W)	Output Voltage Range (Vout)	Output Current Range (A)	Efficiency (%)	UL Max Case Temp. TC (°C)	THD (%)	Power Factor	Dimming Method	Dimming Range (%)
120~277Vac	5~55W MAX	20~51Vdc	0.11~1.40A	87~84% (typical)	90°C	< 20%	> 0.9	0-10V (Isolated Sink / Source)	1-100% (% of Iout)

Values listed above are a summary of product family data. For exact values see operational performance charts.



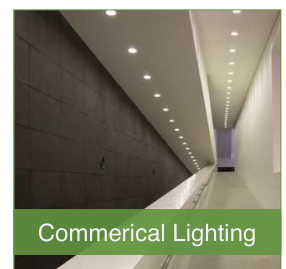
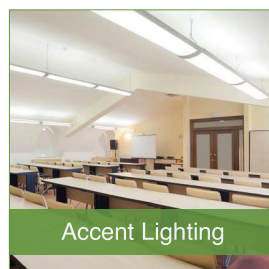
Variants available:

SINGLE CHANNEL SERIES		WHITE TUNING SERIES		
XEL-051T (55W)	XEL-081T (75/85W)	XEL-052R	XEL-072T (55W)	XEL-082T (75/85W)

- Driver Optimized for COB Based Designs
- Ideal for Recessed & Down Lighting
- 1% Dimming with Dim-to-Off or Continuous Mode
- Programmable Via NFC
- Universal AC input (108~305Vac)
- Enables DLC compliant fixtures
- Turn on/off in less than 500 milliseconds
- Built-in Commercial grade Surge Protection
- Integrated over voltage & open load, over current, short circuit & temperature protection
- Turn on & Full power operation between -30°C to +55°C ambient¹
- 5 Year Warranty²
- Serial Port Model supports Live Configuration, Control & Reporting
- Auxiliary Always-On Output (Serial port models only)
- UL Class P & Class 2 Output Driver
- Class A Noise Rating
- Complies to FCC CFR Title 47 Part 15 Class B

See product specific data pages for details.

Typical Applications



Dimensions & Installation

(not to scale)

CASE

Material	Painted White Steel
Unit Weight	250g ~ 270g (±5g)
Dimensions	126.5mm x 60.5mm x 30mm / 5.0" x 2.4" x 1.2"
Mounting Length	Tabs: 116mm / 4.57" Studs: 50.8mm / 2.00"

WIRING

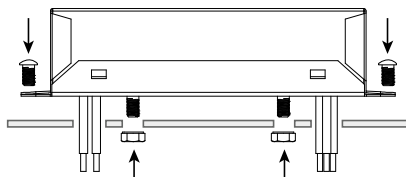
Input Wires	18AWG (UL1569) (L:Black, N:White)
Output Wires	18AWG (UL1569) (LED+:Red, LED-:Blue)
Socket	RJ11 - Not on Standard Models, contact sales.
DIM Wires	22AWG (UL1430) (DIM+:Purple, DIM-:Gray or Pink*)
Wire Lengths	152.4mm (±3mm) / 6" (±0.12")
Strip Lengths	9.5mm (±0.5mm) / 0.375" (±0.02")

*XenerQi Driver Configuration & Programming Tools Manual' available on request
*DIM- wire may be shipped in gray or pink as per NEMA-100 202X (Pink only after transition period)

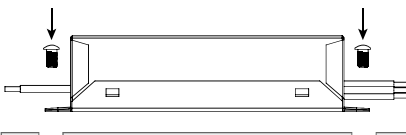
MOUNTING & INSTALLATION

Fixings 2x M6*8mm / 12-24*5/15" Fasteners / 2x M4 Nuts

REU (Bottom Exit)



RBU (Side Exit)



WARNING: TO REDUCE THE RISK OF FAILURE / INJURY
DRIVER CASE MUST BE ELECTRICALLY GROUNDED.
DRIVER MUST BE INSTALLED IN LUMINAIRE IN ACCORDANCE WITH THE LOCAL CODES.
FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY AND/ OR DAMAGE TO THE SYSTEM.
DRIVER CASE BOTTOM SURFACE MUST BE MOUNTED FLUSH, SECURED AND IN CONTACT WITH FIXTURE HOUSING.

LABELS

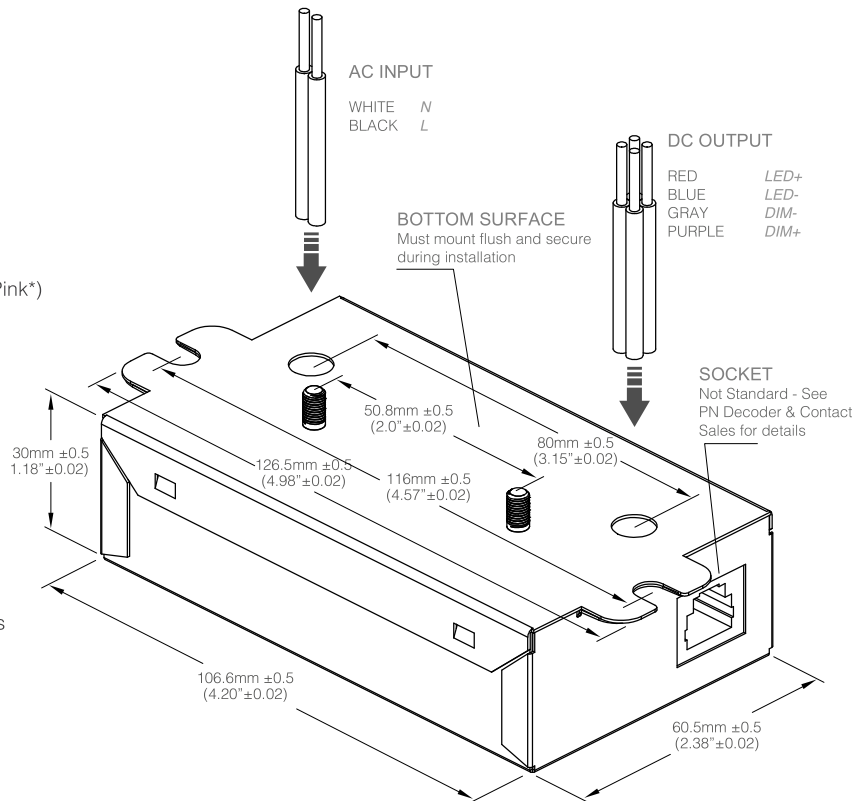
Example Label
(For Reference Only - data will vary dependant on model numbers)



BOTTOM EXIT WIRE PACKAGE (REU)

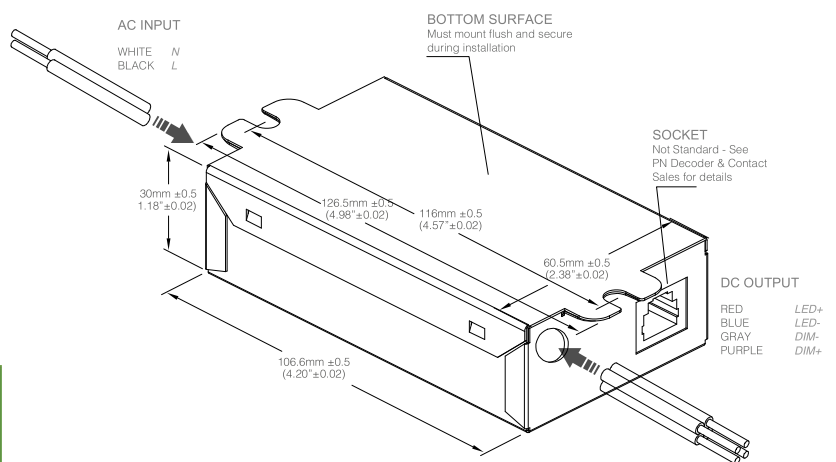
ORDER CODE: XEL-051R**EU**

Detailed 2D & 3D dimensional drawings available on request.



SIDE EXIT WIRE PACKAGE (RBU)

ORDER CODE: XEL-051R**BU**



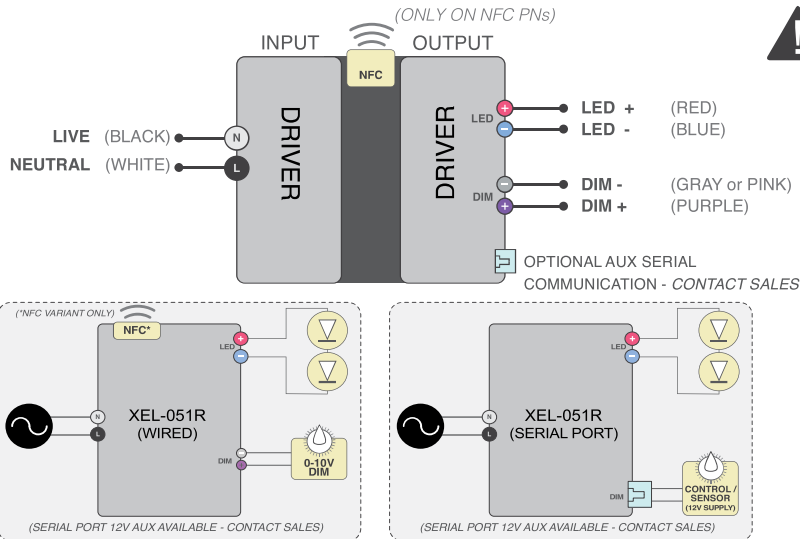
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Specification Data

Output³	Programmable Power Range	5~55W MAX (See Available Models for variant specific data)
	Variant Power Ranges	5~12.5W (CX375D), 9.2~23W (CX600D), 12~30W (C1X05D), 22~55W (C1X40D)
	Programmable Current Range	0.11~1.40A (See Available Models for variant specific data)
	Output Voltage Range	20~51Vdc
	Line Regulation ³	< 1.0%
	Load Regulation ³	< 3.5%
	Turn On/Off Time	< 500ms (at full load)
Input	Stand-by Power	< 1.0W
	Voltage Range ⁴	120 ~ 277Vac Nominal (108 ~ 305Vac Operational)
	Variant Max Input Power	15.6W (CX375D), 27.9W (CX600D), 36.8W (C1X05D), 65.5W (C1X40D)
	Frequency Range	47 ~ 63 Hz
	Power Factor	PFC > 0.9 at ≥ 40% of full programmed power ⁴
	THD	THD < 20% at ≥ 40% of full programmed power ⁴
	Typical Inrush Current (See Pg5 for Specific Model Data)	≤9.6A/245μs@120V (per ANSI test method. Compliant with NEMA410-2015) ≤22.7A/214μs@277V (per ANSI test method. Compliant with NEMA410-2015)
Programming	NFC (Wireless)	Via NFC (with standard FEIG programming wand - Zhaga Book 24/ ISO 15963) (XenerQi programming software & configuration files required - contact sales)
	Factory Set	Factory Programmed (Based on Custom User Configuration File)
Dimming⁸	Modes	DC Analog Dimming control: 0-10Vdc (1%) Sink / Source
	Source Current	100μA (Isolated)
	Compatibility	ANSI/IEC Compliant Linear curve. User Programmable Log Curve & 0-10V End Point Voltages
	Dim-to-Off (Default Setting)	Off-to-on: V > 0.85V; On-to-off: V < 0.65V
Protection	Continuous Mode	Dim-to-off is disabled (Driver remains at lowest DIM level)
	Short Circuit	Auto-restart (after fault removed)
	Over Voltage & Open Load	Vout < 60V (Class-2)
	Over Current	Inherently limited over operational range
Environment	Over Temperature	Current foldback at hotspot greater than 85°C (shut down at <100°C) ⁵
	Working Temperature	-40°C ~ 55°C ambient ¹ (Tc rated for 90°C)
	Operating Life	50,000 Hours (at 95% max power, Tc < 75C) (Higher Operating Temperature Model Available - Contact Sales)
	Working Humidity	20% ~ 90% RH non-condensing
	UL Rating	Dry / Damp location use / IP20
	Storage Temperature	-40°C ~ 85°C ambient
	Storage Humidity	10% ~ 90% RH non-condensing
Safety & EMC	Vibration & Impact Resistance	3 ~ 50Hz 1g (for 30 minutes) / 1 g/s (Impact Resistance)
	Safety Standards	UL8750, Class 2, Class P rated, NOM
	Noise Rating	Class A (Less than 24dB measured at 1 meter) ^{3,7}
	EMI Conduction & Radiation	Compliant with FCC CFR Title 47 Part 15 Class B (Class A @ 277V) CAN ICES (B) (A @ 277V) / NMB-005 (B) (A @ 277V)
	EMC Susceptibility	EN61000-4-3, EN61000-4-2, EN61000-4-4
	Transient Immunity	2kV/1kA Combination, 2.5kV Ringwave 30N
		Modes: L-N, L-G, N-G For applications with higher surge protection requirements, pair with XenerQi's lighting optimized surge protectors: 10K Surge Protection: XEL-PA10S-277 / XEL-SU10C-277 20K Surge Protection: XEL-PA20S-277 / XEL-SU20C-277

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Typical Application & Wiring Diagram



WARNING: TO PREVENT DAMAGE DRIVERS ARE INTENDED TO BE PROGRAMMED WHILE DRIVER IS POWERED OFF



Ordering Codes & Available Models

ORDER CODE ('X' indicates type/feature selection)

XEL-051R X U - C A A A B - X Z A N M - A 0 1

E: Bottom Exit Wires Case
B: Side Exit Wires Case

Current Rating
(see model table below)

PLATFORM INDICATOR

W: NFC Programmable (Wireless)
F: Factory Set

U: Serial Port Socket & AUX (Contact Sales)
Z: 0-10V Dimming

CASE OPTIONS:

BOTTOM / SIDE EXIT WIRES

XEL-051R E

XEL-051R B



	Part Number / Ordering Codes (Replace X with case choice)	Programmable Output Current Range (mA)	Min Programmable Current (for 1% Dim)	Output Voltage Range (V)	Maximum Efficiency ^{6,7}	Max Output (W)
NFC Programmable Variants	XEL-051R X U - C1X40D - WZAN - A01*	420~1400	600	20 ~ 51	87.4%	55.0W
	XEL-051R X U - C1X05D - WZAN - A01*	315~1050	450	20 ~ 51	86.6%	30.0W
	XEL-051R X U - CX600D - WZAN - A01*	180~600	250	20 ~ 51	85.9%	23.0W
	XEL-051R X U - CX375D - WZAN - A01*	110~375	150	20 ~ 51	84.0%	12.5W

FACTORY Fixed Variants	XENERQI FACTORY CONFIGURED VARIANTS ARE AVAILABLE. PLEASE CONTACT SALES TO DISCUSS YOUR SPECIFIC REQUIREMENTS					

* Drivers are shipped preset to the minimum programmable current for 1% Dimming / Customized Variants available upon request. Replace 'X' with required feature alphanumeric when ordering.

¹ Ambient is estimated. Actual temperatures determined by trigger point temperature at driver hotspot. Assumes case is correctly mounted on flat surface.

² Warranty refers to operation for conditions listed under "Operating Life". For specific warranty details refer to XenerQi published warranty document.

³ Parameters guaranteed only over nominal input range.

⁴ Shutdown requires power cycle to recover.

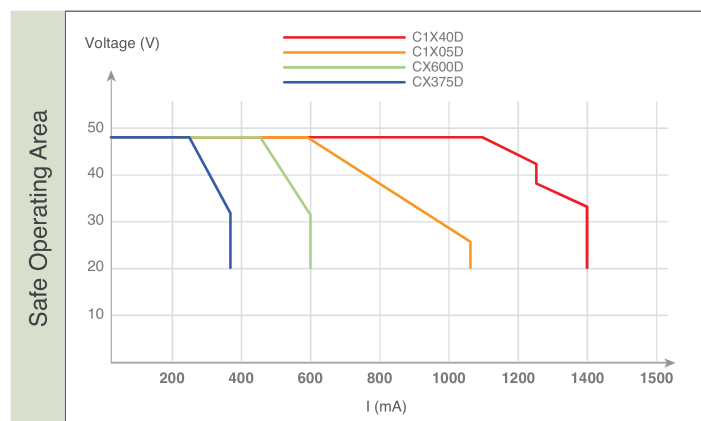
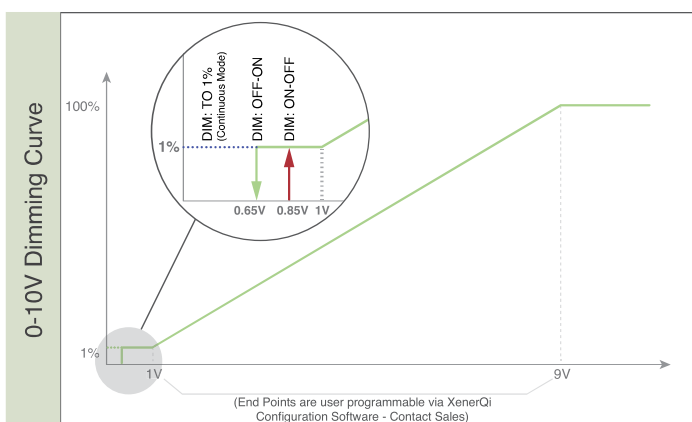
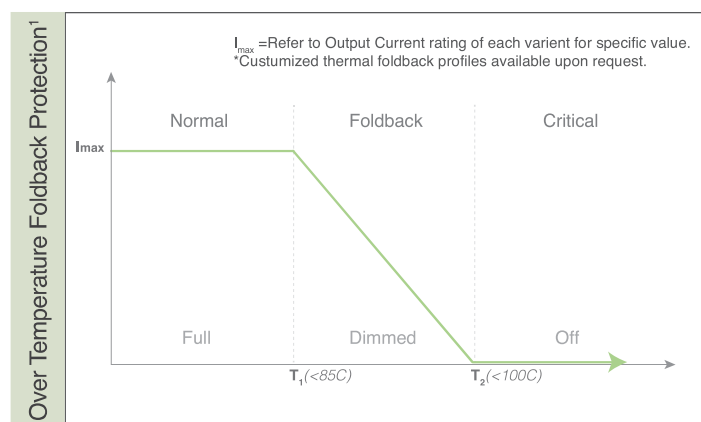
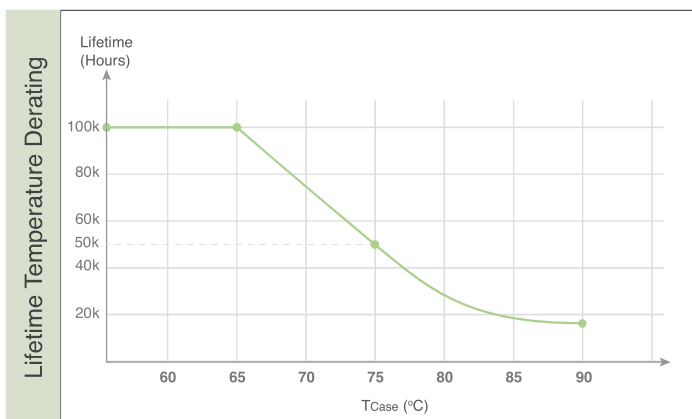
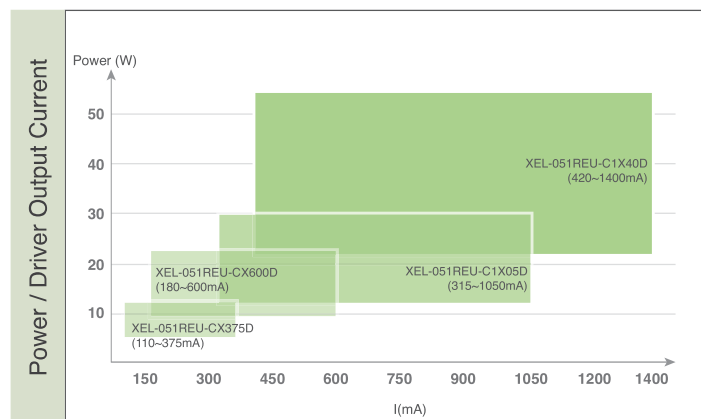
⁵ Units optimized for LED load Vf as per "Optimized Vf" value in specification data.

⁶ Tested under two conditions: with & without dimmer connected.

⁷ Value listed is maximum or minimum and can vary based on usage conditions.

⁸ Driver is designed to meet the 2019 flicker recommendations from IEEE/NEMA with an emphasis on human factors engineering. When the driver is utilized with the appropriate LED load the Luminaire is expected to meet IEEE-1789 recommendations for No-Risk. Customer must validate final system compliance.

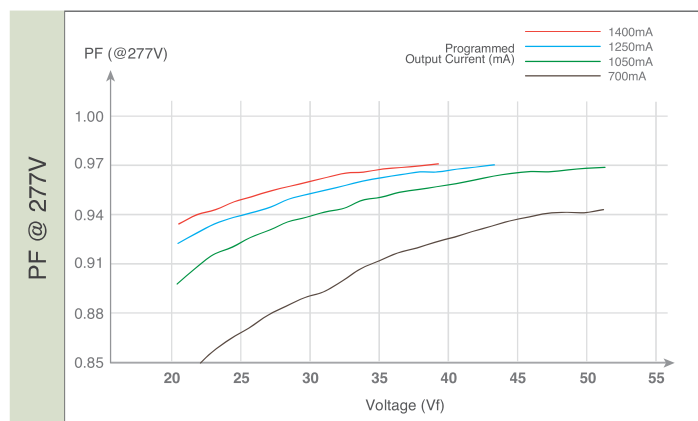
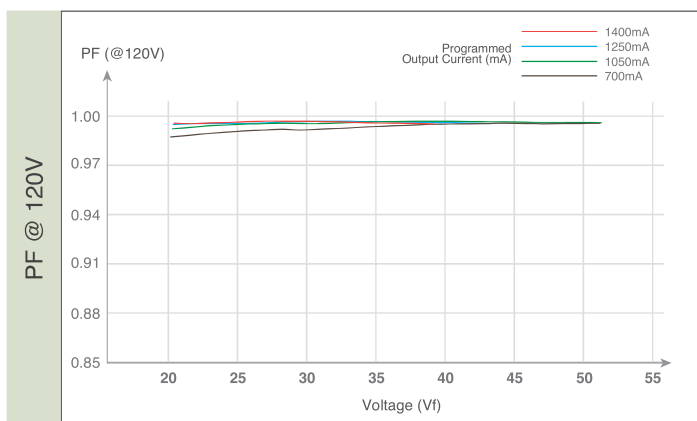
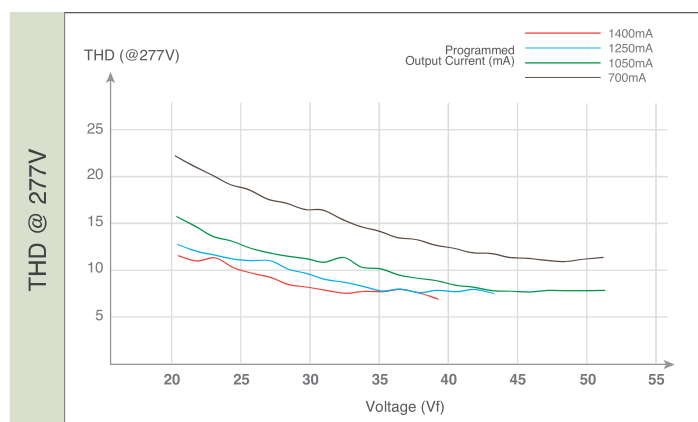
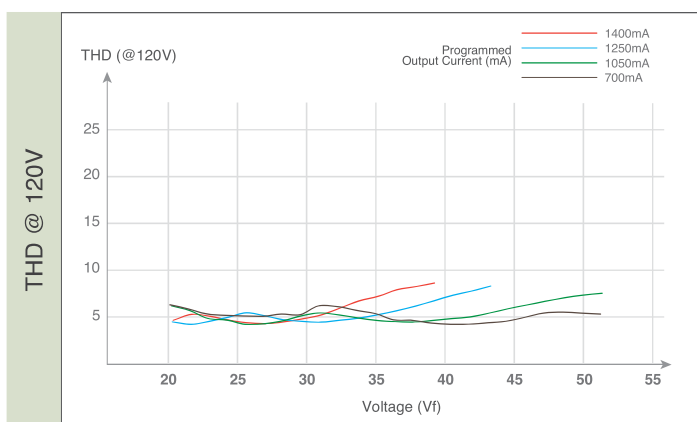
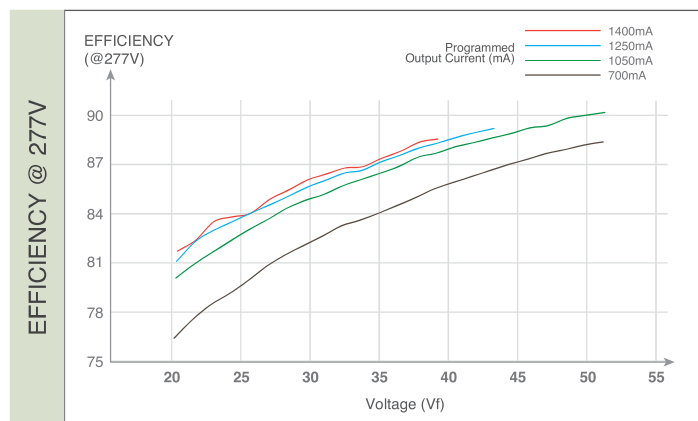
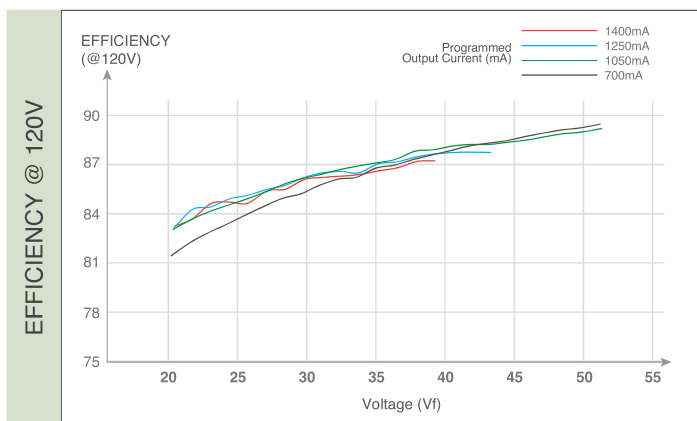
Operation Performance-Family



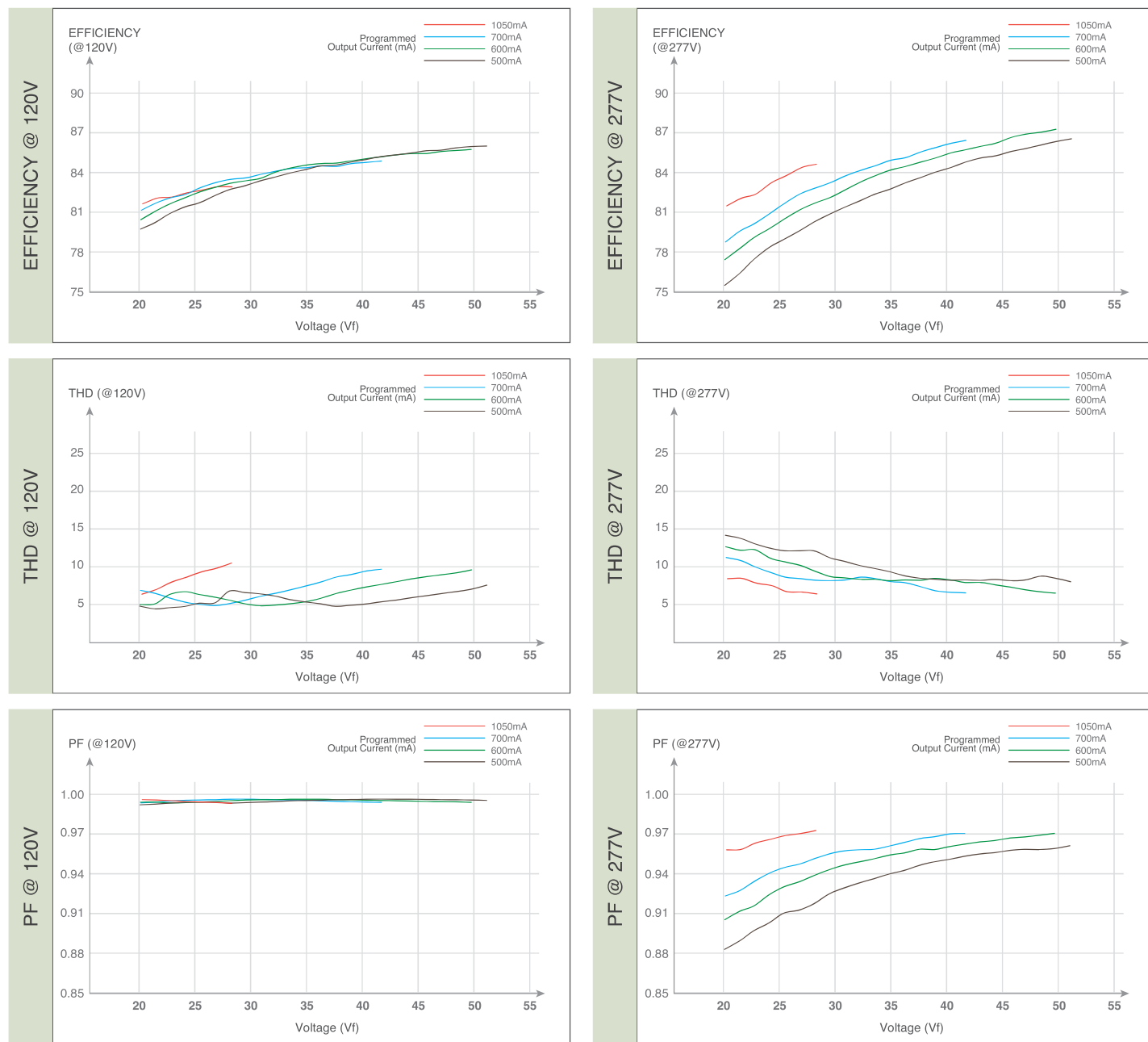
Inrush Current Data

Model#	@120V	@277V
C1X40D (55W)	≤9.6A / 116μs	≤22.7A / 98μs
C1X05D (30W)	≤9.6A / 116μs	≤22.7A / 98μs
CX600D (23W)	≤9.6A / 116μs	≤22.7A / 98μs
CX375D (12.5W)	≤9.6A / 116μs	≤22.7A / 98μs

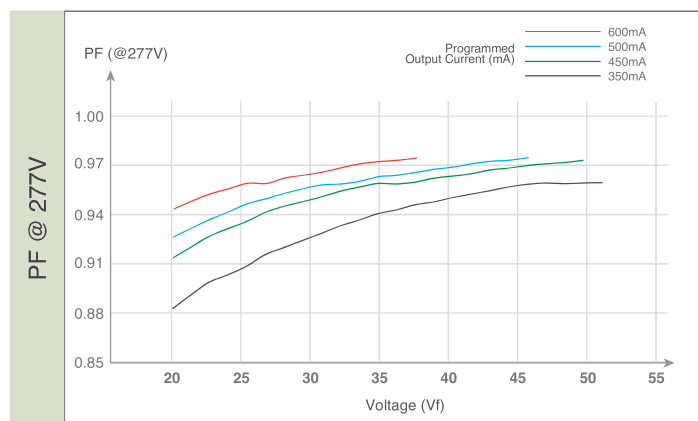
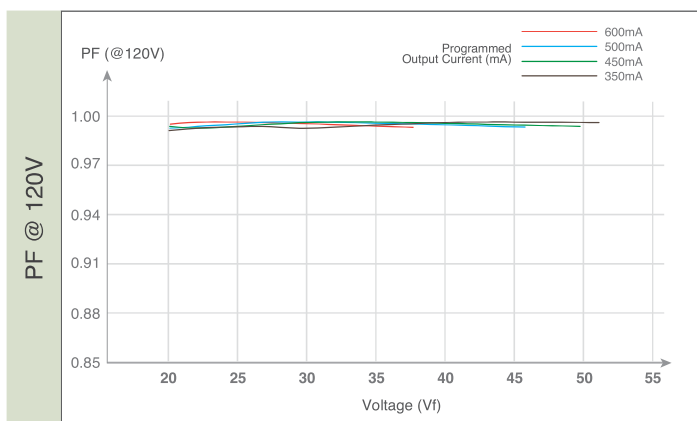
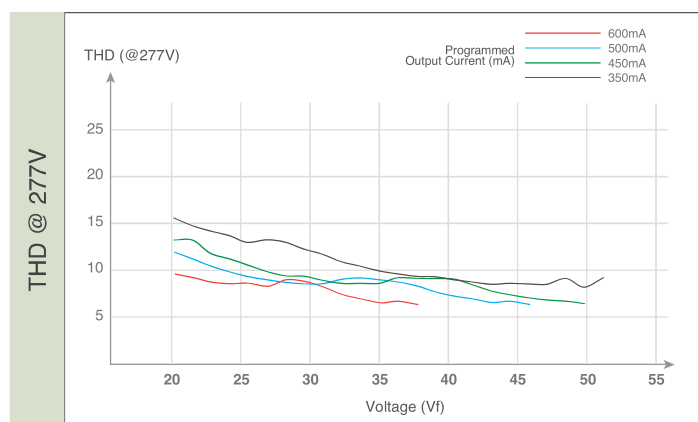
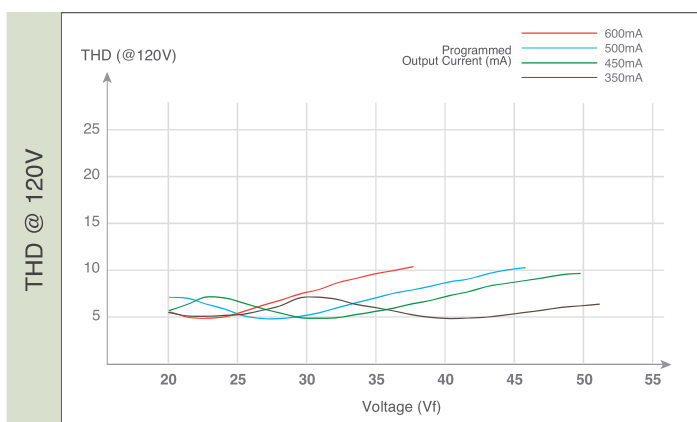
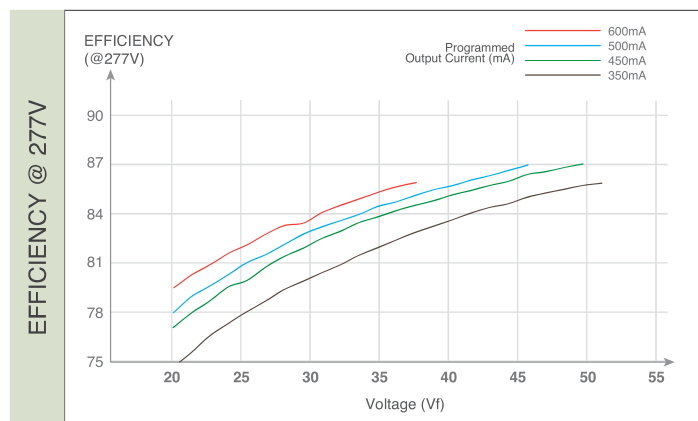
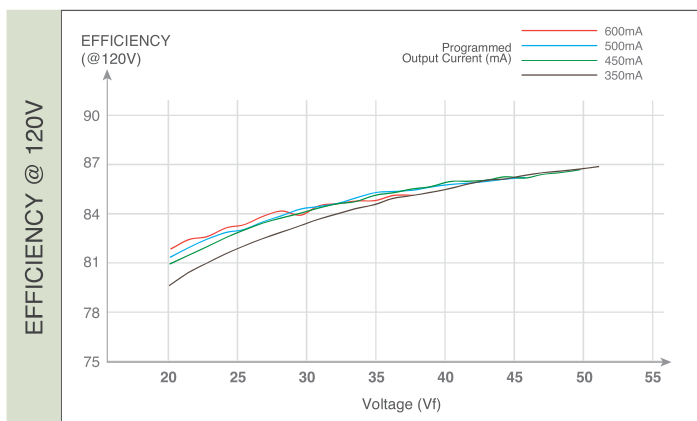
Operation Performance - C1X40D (55W)



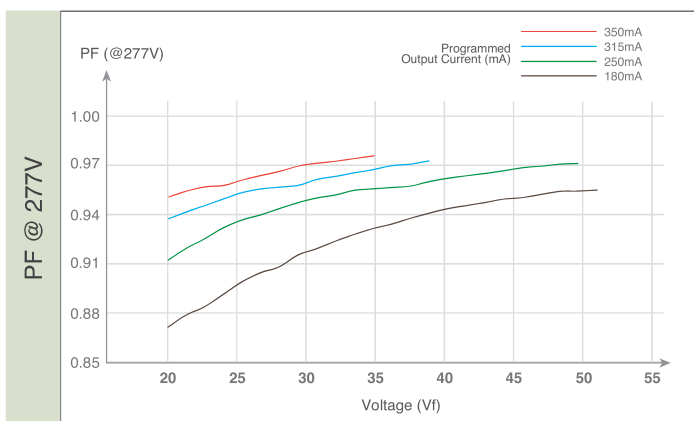
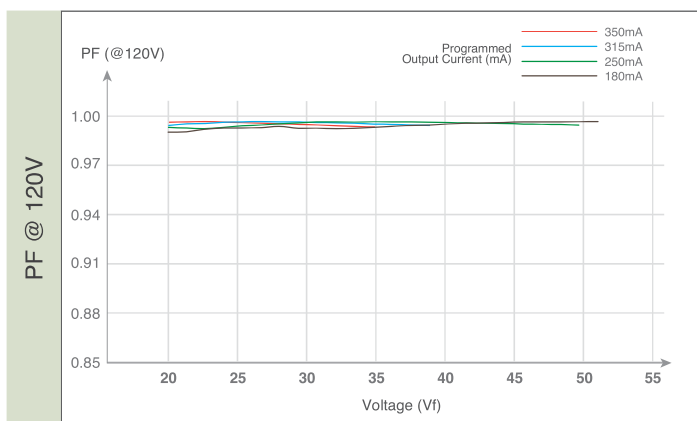
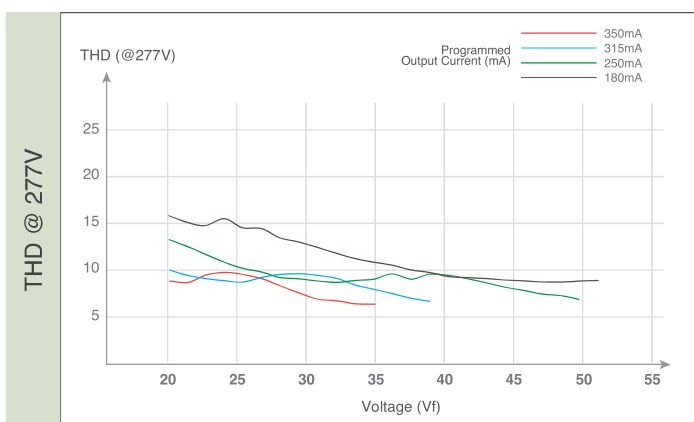
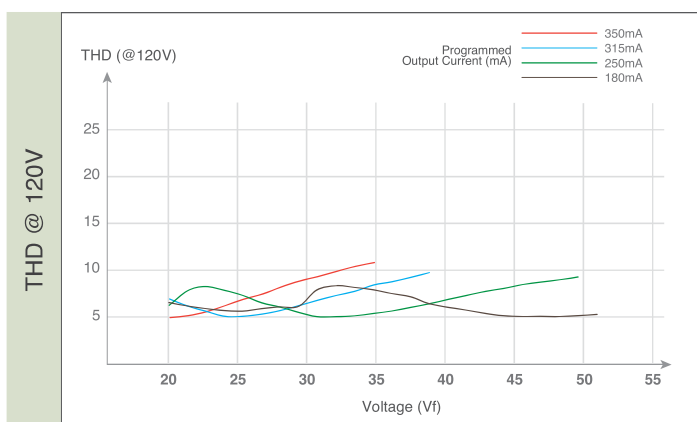
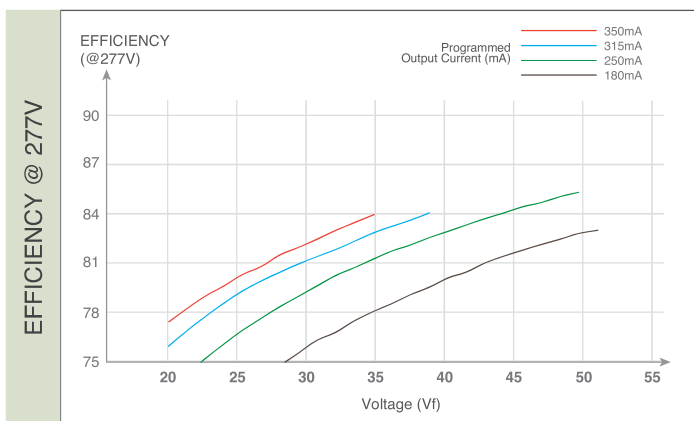
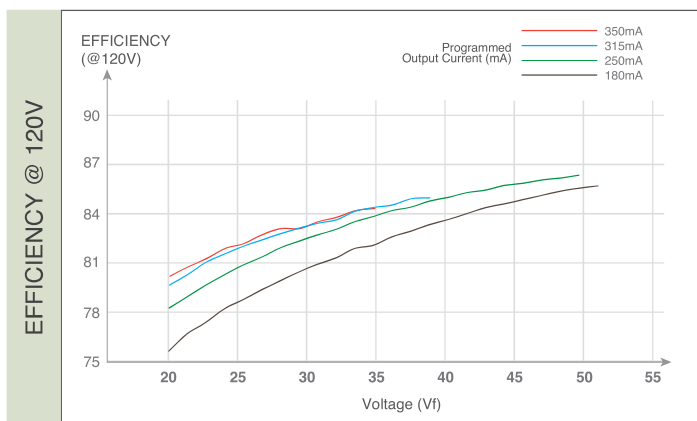
Operation Performance - C1X05D (30W)



Operation Performance - CX600D (23W)



Operation Performance - CX375D (12.5W)



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