

Multiple Current Non-Dimmable LED Driver

Constant Current Version



HE2040 / HE2050 / HE2060
HE1050L / HE1050H / HE1080H



Applications

Suitable for mounting outside of the light fixture in applications which use slim fixtures such as LED light bar and LED tape designs.

Models for all fixture types- insulated terminal cover with cord restraint:

- Office / Commercial Lighting
- Retail & Hotel
- Display / Domestic lighting

Use for retrofit upgrades & new luminaire designs.



Features

- Active PFC Design
 - Configurable Constant Current (CC) Output via Dip-Switch
 - Thermal Cut-out Protection
 - Short Circuit Protection
 - Over-load Protection
 - 5 Year, 50,000hr Warranty
- } All with Auto-restart

Output Configuration

HE2040, 1x40W

| | |
|--------|-----------|
| 350mA | ○ ○ ○ ○ ○ |
| 400mA | ● ○ ○ ○ ○ |
| 450mA | ○ ● ○ ○ ○ |
| 500mA | ● ● ○ ○ ○ |
| 550mA | ○ ○ ● ○ ○ |
| 600mA | ● ○ ● ○ ○ |
| 650mA | ○ ● ● ○ ○ |
| 700mA | ● ● ● ○ ○ |
| 750mA | ○ ○ ● ● ○ |
| 800mA | ● ○ ● ● ○ |
| 850mA | ○ ● ● ● ○ |
| 900mA | ● ● ● ● ○ |
| 950mA | ○ ○ ● ● ● |
| 1000mA | ● ○ ● ● ● |
| 1050mA | ○ ● ● ● ● |
| 1100mA | ● ● ● ● ● |

HE2050, 1x50W

| | |
|--------|-----------|
| 700mA | ○ ○ ○ ○ ○ |
| 750mA | ● ○ ○ ○ ○ |
| 800mA | ○ ● ○ ○ ○ |
| 850mA | ● ● ○ ○ ○ |
| 900mA | ○ ○ ● ○ ○ |
| 950mA | ● ○ ● ○ ○ |
| 1000mA | ○ ● ● ○ ○ |
| 1050mA | ● ● ● ○ ○ |
| 1100mA | ○ ○ ● ● ○ |
| 1150mA | ● ○ ● ● ○ |
| 1200mA | ○ ● ● ● ○ |
| 1250mA | ● ● ● ● ○ |
| 1300mA | ○ ○ ● ● ● |
| 1350mA | ● ○ ● ● ● |
| 1400mA | ○ ● ● ● ● |

HE2060, 1x60W

| | |
|-------|---------------------|
| 2.10A | ● ● ● ● ● ● ● ● ● ● |
| 2.00A | ○ ● ● ● ● ● ● ● ● ● |
| 1.75A | ● ● ● ● ● ● ● ● ● ○ |
| 1.60A | ○ ● ● ● ● ● ● ● ● ○ |
| 1.40A | ● ● ● ● ● ● ● ● ○ ○ |
| 1.20A | ○ ○ ● ● ● ● ● ● ○ ○ |
| 1.05A | ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ |

HE1050H, 1x50W

| | |
|--------|---------------------|
| 1200mA | ● ● ● ● ● ● ● ● ● ● |
| 1150mA | ○ ● ● ● ● ● ● ● ● ● |
| 1100mA | ● ● ● ● ● ● ● ● ● ○ |
| 1050mA | ○ ● ● ● ● ● ● ● ● ○ |
| 1000mA | ● ● ● ● ● ● ● ● ○ ○ |
| 950mA | ○ ○ ● ● ● ● ● ● ○ ○ |
| 900mA | ● ○ ● ● ● ● ● ● ○ ○ |
| 850mA | ○ ● ● ● ● ● ● ● ○ ○ |
| 800mA | ● ● ● ● ● ● ● ● ○ ○ |
| 750mA | ○ ○ ● ● ● ● ● ● ○ ○ |
| 700mA | ● ○ ● ● ● ● ● ● ○ ○ |
| 650mA | ○ ● ● ● ● ● ● ● ○ ○ |
| 600mA | ● ● ● ● ● ● ● ● ○ ○ |
| 550mA | ○ ○ ● ● ● ● ● ● ○ ○ |
| 500mA | ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ |

HE1050L, 1x50W

| | |
|-------|---------------------|
| 600mA | ● ● ● ● ● ● ● ● ● ● |
| 575mA | ○ ● ● ● ● ● ● ● ● ● |
| 550mA | ● ● ● ● ● ● ● ● ● ○ |
| 525mA | ○ ● ● ● ● ● ● ● ● ○ |
| 500mA | ● ● ● ● ● ● ● ● ○ ○ |
| 475mA | ○ ○ ● ● ● ● ● ● ○ ○ |
| 450mA | ● ○ ● ● ● ● ● ● ○ ○ |
| 425mA | ○ ● ● ● ● ● ● ● ○ ○ |
| 400mA | ● ● ● ● ● ● ● ● ○ ○ |
| 375mA | ○ ○ ● ● ● ● ● ● ○ ○ |
| 350mA | ● ○ ● ● ● ● ● ● ○ ○ |
| 325mA | ○ ● ● ● ● ● ● ● ○ ○ |
| 300mA | ● ● ● ● ● ● ● ● ○ ○ |
| 275mA | ○ ○ ● ● ● ● ● ● ○ ○ |
| 250mA | ● ○ ● ● ● ● ● ● ○ ○ |
| 225mA | ○ ● ● ● ● ● ● ● ○ ○ |

HE1080H, 1x80W

| | |
|--------|---------------------|
| 1650mA | ● ● ● ● ● ● ● ● ● ● |
| 1600mA | ○ ● ● ● ● ● ● ● ● ● |
| 1550mA | ● ● ● ● ● ● ● ● ● ○ |
| 1500mA | ○ ● ● ● ● ● ● ● ● ○ |
| 1450mA | ● ● ● ● ● ● ● ● ○ ○ |
| 1400mA | ○ ○ ● ● ● ● ● ● ○ ○ |
| 1350mA | ● ○ ● ● ● ● ● ● ○ ○ |
| 1300mA | ○ ● ● ● ● ● ● ● ○ ○ |
| 1250mA | ● ● ● ● ● ● ● ● ○ ○ |
| 1200mA | ○ ○ ● ● ● ● ● ● ○ ○ |
| 1150mA | ● ○ ● ● ● ● ● ● ○ ○ |
| 1100mA | ○ ● ● ● ● ● ● ● ○ ○ |
| 1050mA | ● ● ● ● ● ● ● ● ○ ○ |
| 1000mA | ○ ○ ● ● ● ● ● ● ○ ○ |
| 950mA | ● ○ ● ● ● ● ● ● ○ ○ |
| 900mA | ○ ● ● ● ● ● ● ● ○ ○ |

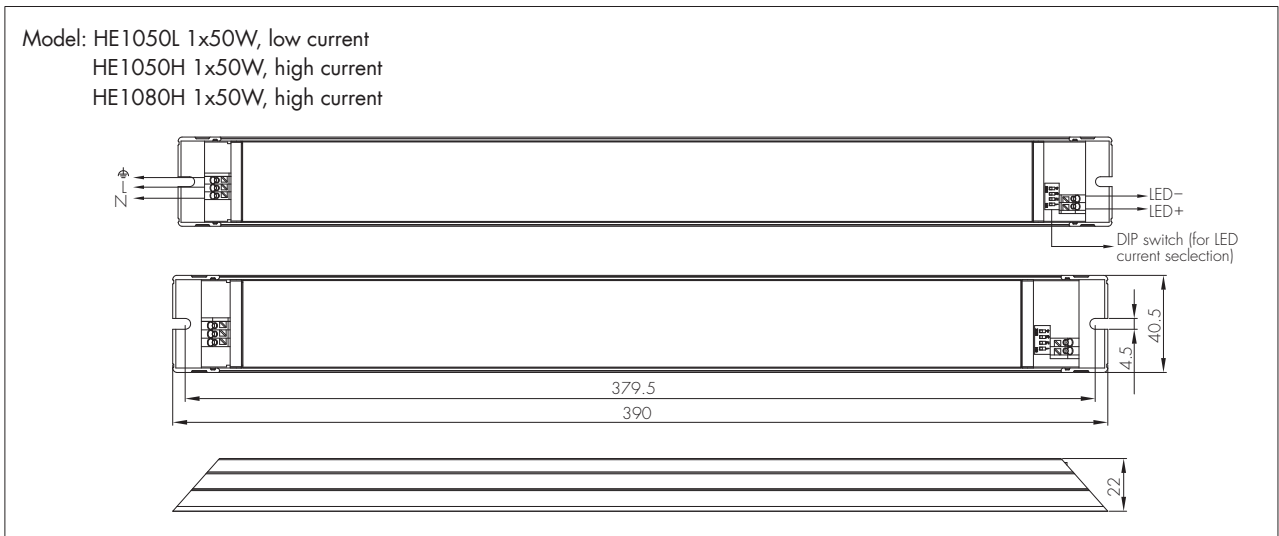
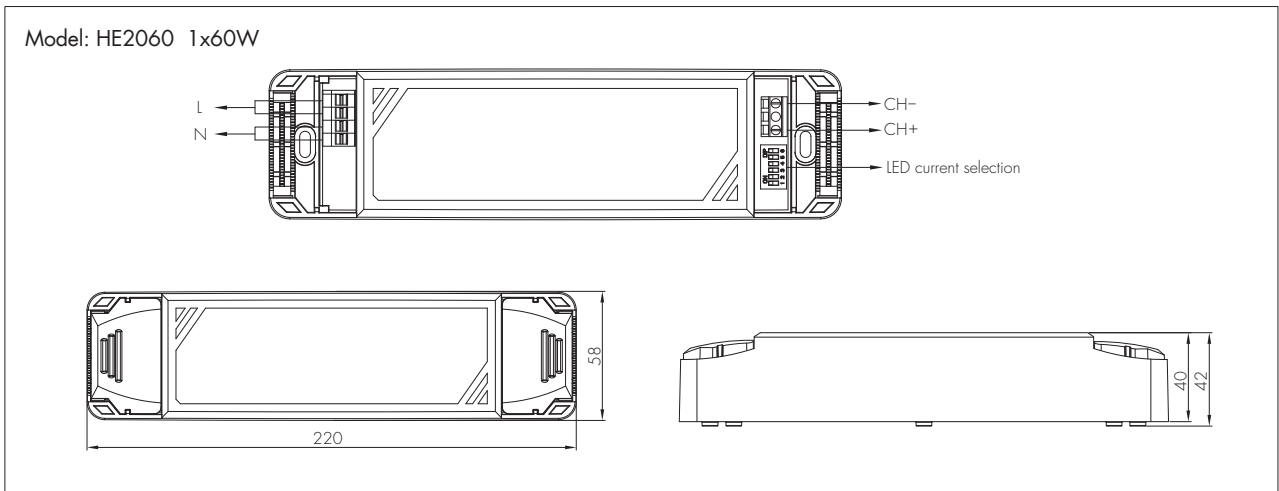
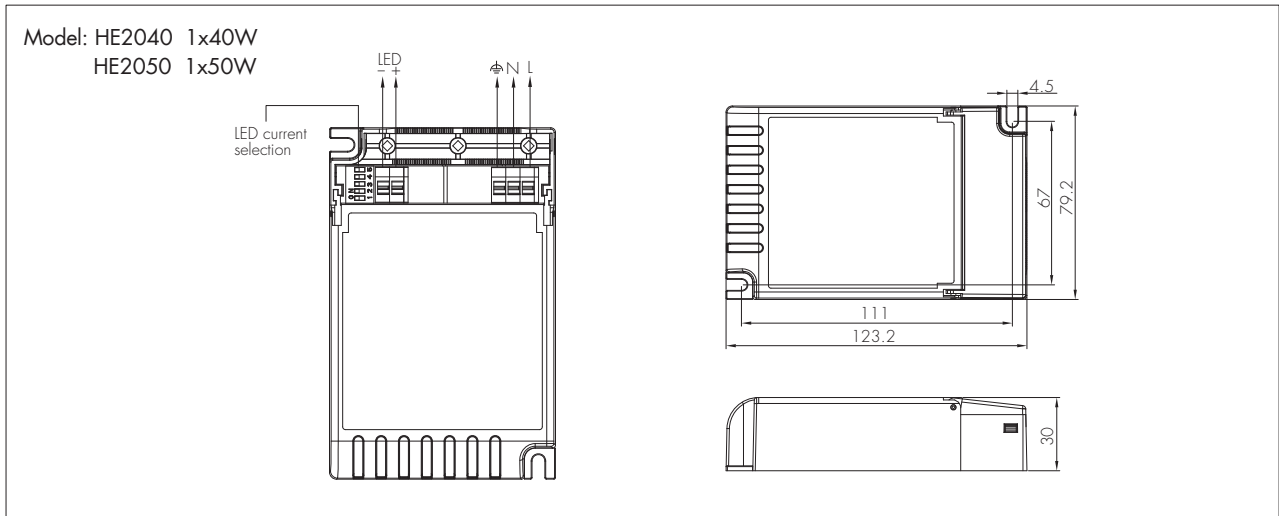
Warning: Please make sure the correct current is selected before starting the driver!

Technical Data

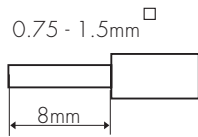
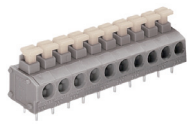
| | Model No. | HE2040 | HE2050 | HE2060 | HE1050L | HE1050H | HE1080H |
|----------------|---------------------|--|-----------|------------|-----------|-----------|-----------|
| Input | Mains Voltage | 220~240VAC 50/60Hz | | | | | |
| | Mains Current | 0.23~0.21A | 0.3~0.25A | 0.35~0.27A | 0.3~0.25A | 0.3~0.25A | 0.45~0.4A |
| | Power Factor | 0.98 | 0.98 | 0.96 | 0.98 | 0.98 | 0.99 |
| | Max. Efficiency | 88% | 89% | 89% | 89% | 90% | 90% |
| | Dielectric Strength | Input→Output : 3000VAC | | | | | |
| | Leakage Current | <0.25mA | <0.25mA | <0.25mA | <0.25mA | <0.25mA | <0.25mA |
| Output | Ripple Current | <3% | <3% | <3% | <3% | <3% | <3% |
| | Uout Max. | 80V | 80V | 80V | 200V | 110V | 120V |
| | Turn-on Time | <0.5s | <0.5s | <0.5s | <0.5s | <0.5s | <0.5s |
| Environment | Operation Temp. | -20~+45°C | -20~+45°C | -20~+45°C | -20~+50°C | -20~+50°C | -20~+50°C |
| | Case Temp. (Max.) | 80°C | 80°C | 80°C | 80°C | 80°C | 80°C |
| | IP Rating | IP20 | IP20 | IP20 | IP20 | IP20 | IP20 |
| Safety and EMC | EMC Standard | EN55015, EN61547, EN61000-3-2, EN61000-3-3 | | | | | |
| | Safety Standard | EN61347-1, EN62493, EN61347-2-13 | | | | | |
| | Certifications | Semko, CB, SAA, CE, EMC | | | | | |

| Model No. | Max. output power/current/voltage range | | | |
|-----------|---|---------------------|---------------------|---------------------|
| HE2040 | 20W/ 350mA /12~58V | 23W/ 400mA /12~58V | 26W/ 450mA /12~58V | 29W/ 500mA /12~58V |
| | 32W/ 550mA /12~58V | 35W/ 600mA /12~58V | 38W/ 650mA /12~58V | 40W/ 700mA /12~58V |
| | 42W/ 750mA /12~56V | 45W/ 800mA /12~56V | 45W/ 850mA /12~53V | 45W/ 900mA /12~50V |
| | 45W/950mA /12~47V | 45W/ 1000mA /12~45V | 45W/1050mA /12~43V | 45W/ 1100mA /12~41V |
| HE2050 | 40W/700mA /12~58V | 43W/ 750mA /12~58V | 46W/ 800mA /12~58V | 49W/ 850mA /12~58V |
| | 50W/900mA /12~56V | 50W/ 950mA /12~53V | 50W/ 1000mA /12~50V | 50W/ 1050mA /12~48V |
| | 50W/1100mA /12~45V | 50W/ 1150mA /12~43V | 50W/ 1200mA /12~42V | 50W/ 1250mA /12~40V |
| | 50W/ 1300mA /12~38V | 50W/ 1350mA /12~37V | 50W/ 1400mA /12~36V | |
| HE2060 | 55W/1.05A /16~53V | 60W/ 1.2A /16~50V | 60W/ 1.4A /16~43V | 60W/ 1.6A /16~38V |
| | 60W/1.75A /16~35V | 60W/ 2.0A /16~30V | 60W/ 2.1A /16~28V | |
| HE1050L | 34W/ 225mA /36~150V | 38W/ 250mA /36~150V | 41W/ 275mA /36~150V | 45W/ 300mA /36~150V |
| | 49W/ 325mA /36~150V | 50W/ 350mA /36~140V | 50W/ 375mA /36~130V | 50W/ 400mA /36~125V |
| | 50W/ 425mA /36~115V | 50W/ 450mA /36~110V | 50W/ 475mA /36~105V | 50W/ 500mA /36~100V |
| | 50W/525mA /36~95V | 50W/ 550mA /36~90V | 50W/575mA /36~86V | 50W/ 600mA /36~83V |
| HE1050H | 40W/ 500mA /12~80V | 44W/ 550mA /12~80V | 49W/ 600mA /12~80V | 49W/ 650mA /12~75V |
| | 49W/ 700mA /12~70V | 50W/ 750mA /12~66V | 50W/ 800mA /12~62V | 50W/ 850mA /12~59V |
| | 49W/ 900mA /12~55V | 49W/ 950mA /12~53V | 50W/ 1000mA /12~50V | 50W/ 1050mA /12~47V |
| | 50W/1100mA /12~45V | 50W/ 1150mA /12~43V | 50W/1200mA /12~42V | |
| HE1080H | 67W/ 900mA /16~75V | 71W/ 950mA /16~75V | 75W/ 1000mA /16~75V | 78W/ 1050mA /16~74V |
| | 79W/ 1100mA /16~72V | 80W/ 1150mA /16~70V | 80W/ 1200mA /16~66V | 80W/ 1250mA /16~64V |
| | 80W/ 1300mA /16~61V | 80W/ 1350mA /16~59V | 80W/ 1400mA /16~57V | 80W/ 1450mA /16~55V |
| | 80W/1500mA /16~53V | 80W/ 1550mA /16~51V | 80W/1600mA /16~50V | 80W/ 1650mA /16~48V |

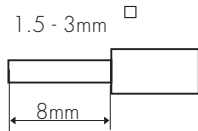
Dimensions and Terminals



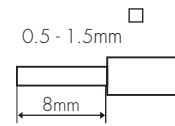
Wire Preparation



Model
HE2040
HE2050
HE2060



LED output
HE2060 only.



Model
HE1050L
HE1050H
HE1080H

To make or release the wire from the terminal, use a screwdriver to push down the button.

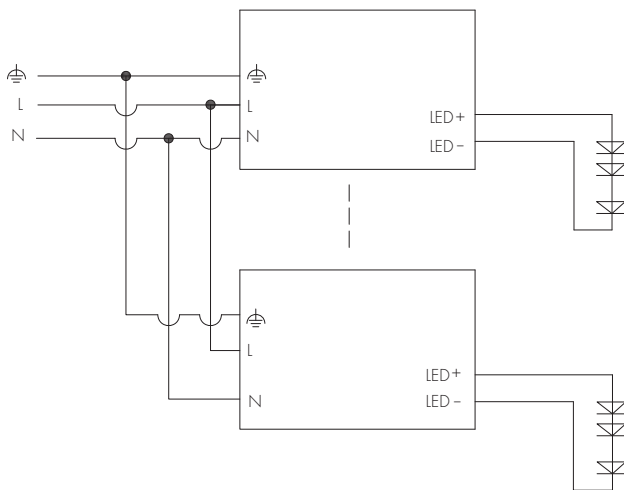
Loading and In-rush Current

| Model | HE2040 | HE2050 | HE2060 | HE1050L | HE1050H | HE1080H |
|--------------------------------------|--------|--------|--------|---------|---------|---------|
| In-rush Current (I _{max.}) | 5.35A | 5.1A | 4.8A | 25.8A | 25.8A | 25.8A |
| Pulse Time | 60μs | 60 μs | 30 μs | 380 μs | 350 μs | 380 μs |

Number of Drivers Based upon 16A Circuit Breaker

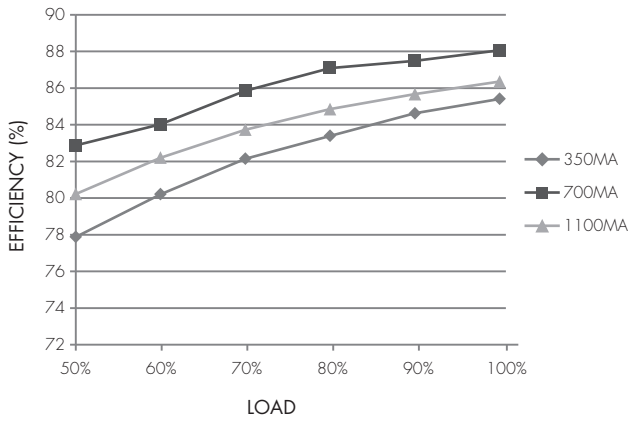
| Cct Breaker Type | HE2040 | HE2050 | HE2060 | HE1050L | HE1050H | HE1080H |
|------------------|--------|--------|--------|---------|---------|---------|
| Type B | 30 | 30 | 27 | 20 | 20 | 16 |
| Type C | 50 | 50 | 45 | 40 | 40 | 30 |

Wiring Diagrams

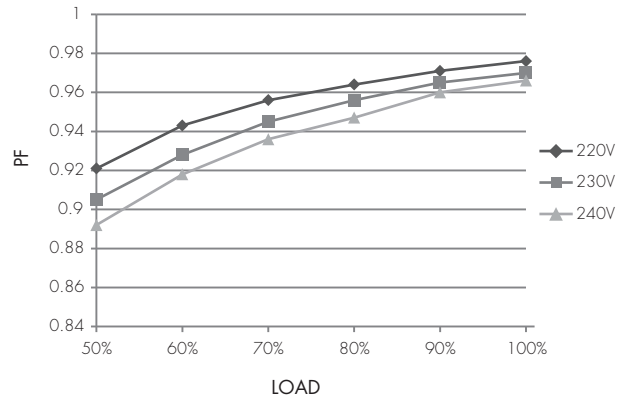


Performance Characteristics

HE2040

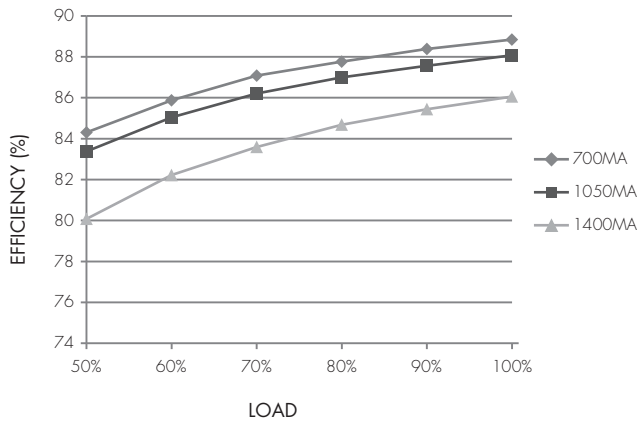


* Typical Efficiency vs Load

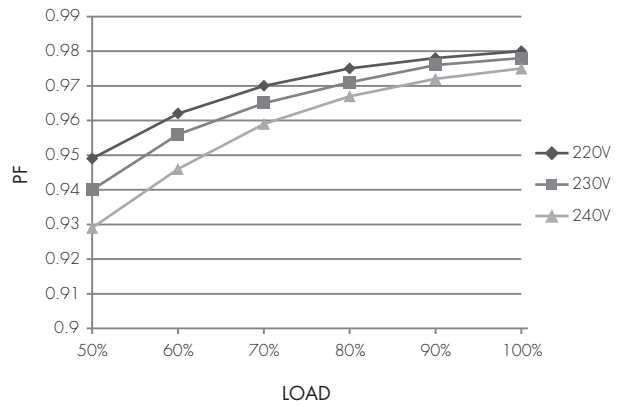


* Typical Power Factor vs Load

HE2050

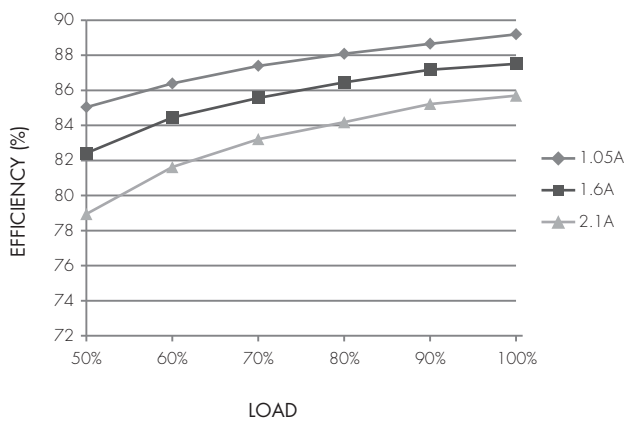


* Typical Efficiency vs Load

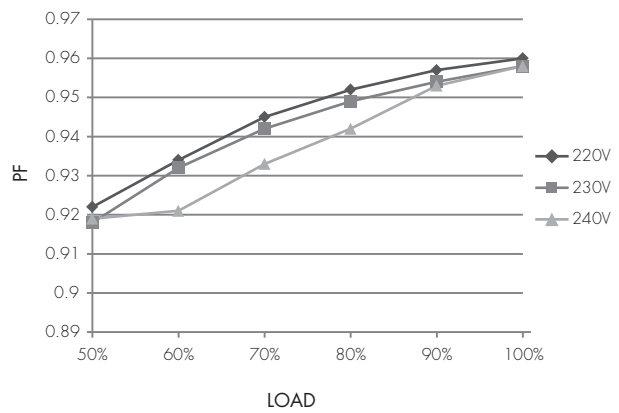


* Typical Power Factor vs Load

HE2060

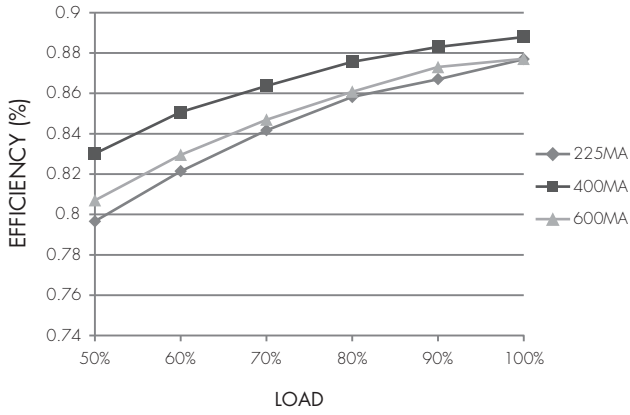


* Typical Efficiency vs Load

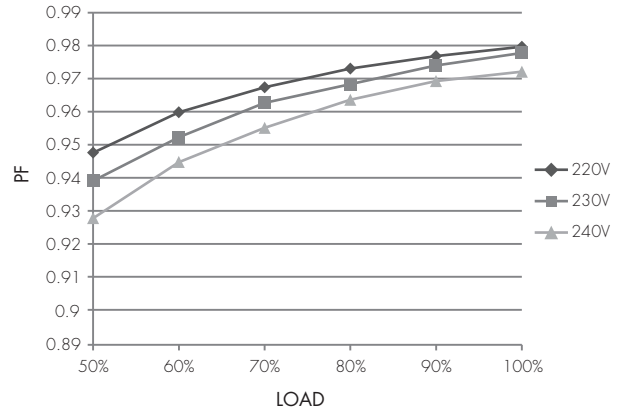


* Typical Power Factor vs Load

HE1050L

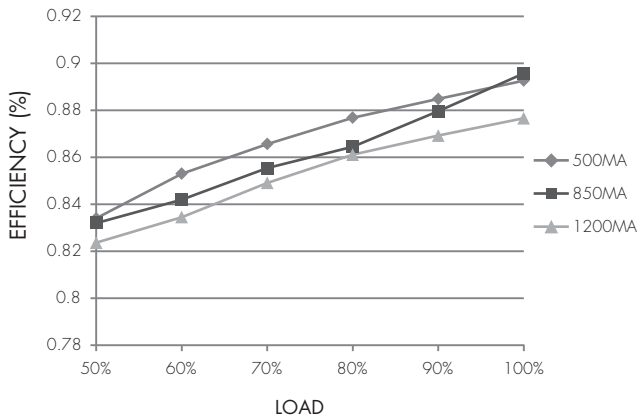


* Typical Efficiency vs Load

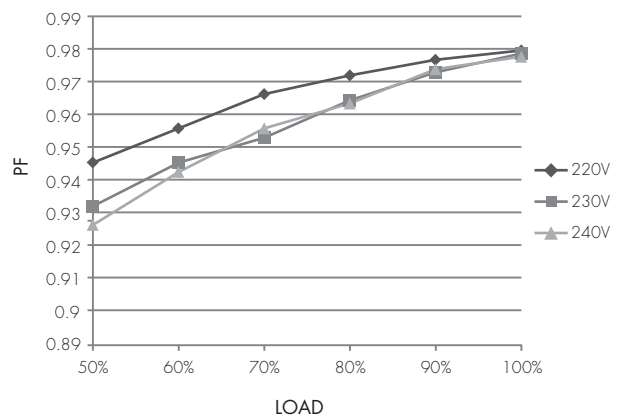


* Typical Power Factor vs Load

HE1050H

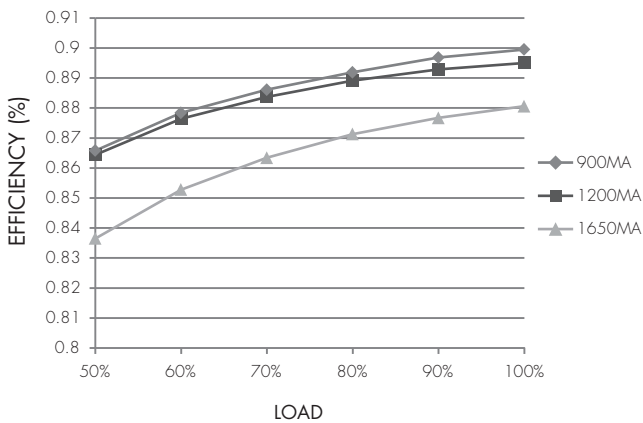


* Typical Efficiency vs Load

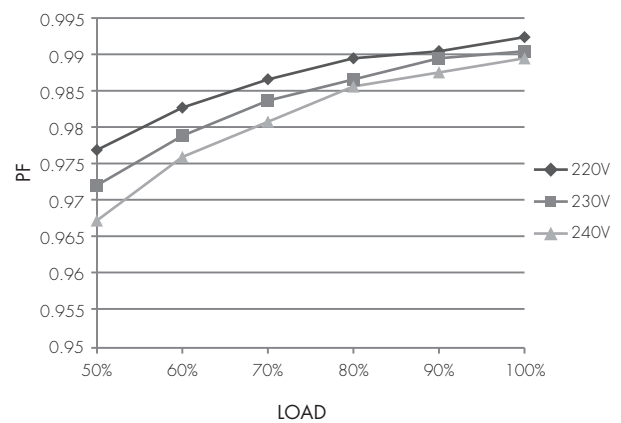


* Typical Power Factor vs Load

HE1080H



* Typical Efficiency vs Load



* Typical Power Factor vs Load