

# Programmable Benchtop DC Power Supplies



## Accurate

The programmable benchtop DC power supplies operate single-supply or intricate multi-power applications such as remote sensing calibration systems. Light measurement system upgrades and sensor calibration systems are easily implemented through a wide variety of interchangeable light source assemblies, lamp standards, and complimentary power supplies.

The power supplies are designed to accurately provide DC current to Labsphere's internal and external reference lamps and other light sources. The current output is selected and set in the LPS configuration software included with the power supply. On/Off control is done through the front panel or external trigger.

## Value

- Programmable regulated DC current
- Programmable regulated DC voltage
- Controlled current ramp up
- Lamp operation timer
- Easy on/off operation
- Front panel or remote control
- Current, voltage readback

## Front panel features

- On/Off button to turn the lamp on and off
- Info button to change the information displayed (status, run time, set up configuration, display brightness)
- LED indicators for:
  - Power
  - Error
  - Remote mode
  - Output on

## Reader panel features

- Lamp power and sense
- External remote trigger input
- Remote sense
- USB for remote programming

## Includes

- Programmable DC power supply
- LPS configuration software
- Operators manual
- Power cord

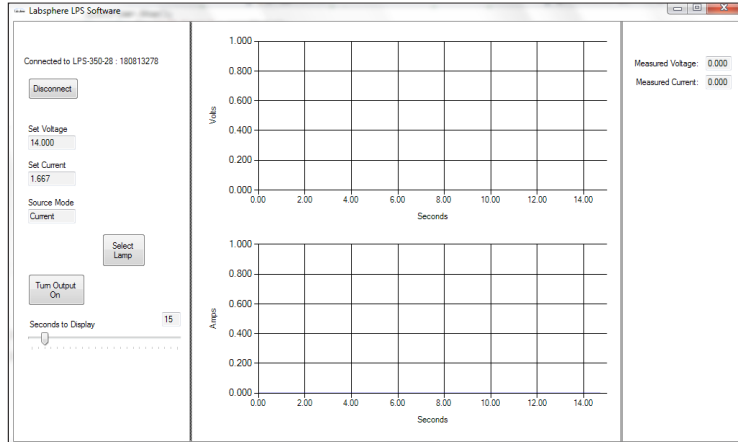
## Sold separately

- Lamps
- Lamp cables

## General Specifications

Display Type:	2 x 20 VFD
Output Connector:	7-Pin CPC
Remote Input:	Yes
External Fan Supply:	12V DC, 0.5A Max
Computer Interface:	USB 2.0 Full Speed (Type B)
Power:	100 - 240 VAC, 50/60 Hz
Size: (inches)	1.75 H x 8.5 W x 13 W
Weight:	5.0 lbs (2.3 kg)
Operating Temperature:	+10°C to +40°C
Storage Temperature:	-20°C to +60°C

LPS is a 1U half-rack unit with optional rack-mount ears available.



LPS Software Main Screen

## LPS-175-27 Specifications

<b>System</b>	<b>LPS-175-27</b>
Part Number:	AS-03158-175

### SUMMARY

Maximum Current: (Amps)	8.33
Maximum Voltage: (Volts)	27
Maximum Power: (Watts)	175
Operating Range:	See chart on following page

### SETPOINT

#### Current

Range: (Amps)	0 - 8.33
Resolution: (Amps)	0.001
Accuracy, Operating Points: (±[% set + A]) <sup>1</sup>	0.025% + 0.0021
Accuracy, Full Range: (±[% set + A]) <sup>2</sup>	0.05% + 0.0042
Stability: (ppm, time)	<50, 1 hour
Temperature Coeff: (ppm/°C)	<50
Noise/Ripple: (mA rms)	<0.5
Transients: (mA)	<0.6
Compliance Voltage: (V)	27

#### Voltage

Range: (V)	0 - 27
Resolution: (V)	0.01
Accuracy: (±[% set + V])	0.05% + 0.014
Stability: (ppm, time)	<50, 1 hour
Temperature Coeff: (ppm/°C)	<100

### MEASUREMENT

#### Current

Resolution: (mA)	0.001
Accuracy: (±[% reading + mA])	0.025% + 0.0021

#### Voltage

Resolution: (V)	0.01
Accuracy: (±[% reading + V])	0.025% + 0.007

### LIMITS

#### Current

Resolution: (A)	0.01
Accuracy: (±A)	0.1

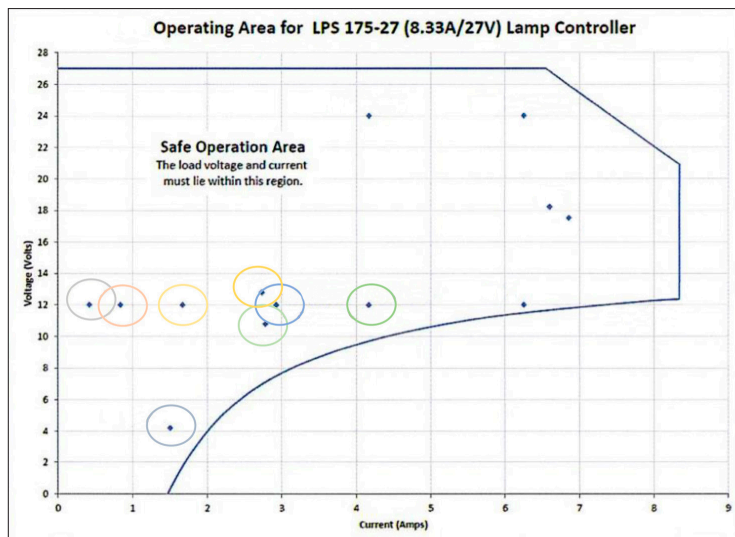
#### Voltage

Resolution: (V)	0.1
Accuracy: (±V)	0.2

<sup>1</sup> Accuracy specified at up to 12 pre-defined operating points.

<sup>2</sup> Accuracy across entire operating range.

# LPS-175-27 Operating Envelope



Can be programmed to operate any DC lamp in this power envelope.

## Labsphere Lamps Operable with LPS-175-27

Watts	Volts	Amps
5	12	0.417

Illuminator	Part Number
IHLS-100-005	AS-02631-005
ITHS-050-5	ITHS-050-5
ITHS-100-5	ITHS-100-5

Watts	Volts	Amps
5	4.2	1.050

Illuminator	Part Number
2PI-1-INT-050 Lamp	AS-80006-000
AUX-050	AS-02986-050
SCL-050	AS-02528-001

Watts	Volts	Amps
10	12	0.833

Illuminator	Part Number
AUX-10	AS-02631-010
ETHS-10	ETHS-10
HIS-010	AS-03015-010
ITHS-100-10	ITHS-100-10

Watts	Volts	Amps
20	12	1.667

Illuminator	Part Number
ETHS-20	ETHS-20
HIS-020	AS-03015-020
ITHS-100-20	ITHS-100-20

Watts	Volts	Amps
30	10.8	2.778

Illuminator	Part Number
IHLS-100-30	AS-02576-030

Watts	Volts	Amps
30	12	2.917

Illuminator	Part Number
HIS-030	AS-03015-030

Watts	Volts	Amps
30	12	2.500

Illuminator	Part Number
ITHS-100-30	ITHS-100-30

Watts	Volts	Amps
35	12	2.920

Illuminator	Part Number
EHLS-100-35R	AS-02630-035
HIS-035	AS-03015-035

Watts	Volts	Amps
35	12.8	2.730

Illuminator	Part Number
2PI-1-INT-600 Lamp	AS-80003-000
AUX-35	AS-02639-000
AUX-600	AS-02986-600
ICS-600	AS-02910-000
SCL-600	AS-01335-000

Watts	Volts	Amps
50	12	4.167

Illuminator	Part Number
AUX-50	AS-81060-002
ETHS-50	ETHS-50
FFS-100-400	AS-02768-100
HIS-050	AS-03015-050
IHLS-100-50	AS-02576-050
ITHS-100-50	ITHS-100-50

# LPS-350-28 Specifications

**System** LPS-350-28  
 Part Number: AS-03158-350

## SUMMARY

Maximum Current: (Amps) 13  
 Maximum Voltage: (Volts) 28  
 Maximum Power: (Watts) 350  
 Operating Range: See chart

## SETPOINT

### Current

Range: (Amps) 0 - 13  
 Resolution: (Amps) 0.001  
 Accuracy, Operating Points: 0.025% + 0.0033  
 ( $\pm$ [% set + A])<sup>1</sup>  
 Accuracy, Full Range: 0.05% + 0.0065  
 ( $\pm$ [% set + A])<sup>2</sup>  
 Stability: (ppm, time) <50, 1 hour  
 Temperature Coeff: (ppm/°C) <50  
 Noise/Ripple: (mA rms) <1  
 Transients: (mA) <1  
 Compliance Voltage: (V) 28

### Voltage

Range: (V) 0 - 28  
 Resolution: (V) 0.01  
 Accuracy: ( $\pm$ [% set + V]) 0.05% + 0.014  
 Stability: (ppm, time) <50, 1 hour  
 Temperature Coeff: (ppm/°C) <100

## MEASUREMENT

### Current

Resolution: (mA) 0.001  
 Accuracy: ( $\pm$ [% reading + mA]) 0.025% + 0.0033

### Voltage

Resolution: (V) 0.01  
 Accuracy: ( $\pm$ [% reading + V]) 0.025% + 0.007

## LIMITS

### Current

Resolution: (A) 0.01  
 Accuracy: ( $\pm$ A) 0.1

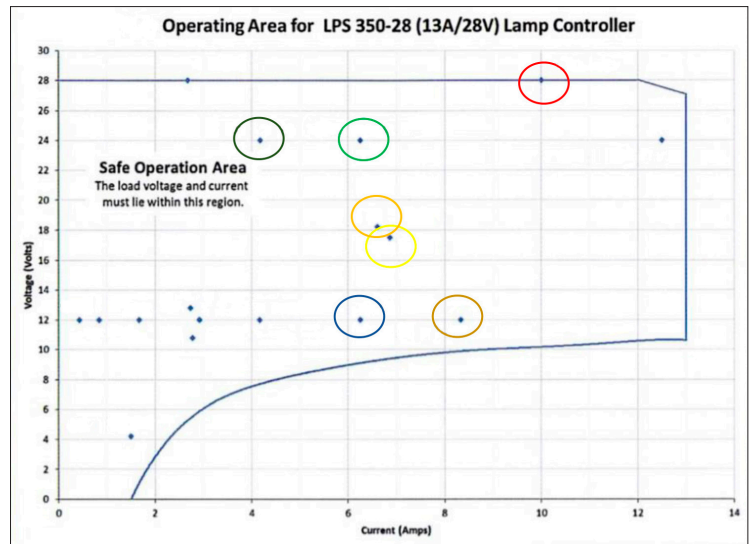
### Voltage

Resolution: (V) 0.1  
 Accuracy: ( $\pm$ V) 0.2

<sup>1</sup> Accuracy specified at up to 12 pre-defined operating points.

<sup>2</sup> Accuracy across entire operating range.

# LPS-350-28 Operating Envelope



Can be programmed to operate any DC lamp in this power envelope.

## Labsphere Lamps Operable with LPS-350-28

Watts	Volts	Amps
75	12	6.250

Illuminator	Part Number
AUX-75	AS-02631-075
HIS-075	AS-03015-075
IHLS-100-75	AS-02576-075
ITHS-100-75	ITHS-100-75

Watts	Volts	Amps
100	12	8.333

Illuminator	Part Number
FFS-100-1000	AS-02768-200
IHLS-100-100,12V	AS-02576-100

Watts	Volts	Amps
100	24	4.170

Illuminator	Part Number
EHLS-100-100R	AS-02630-100

Watts	Volts	Amps
100	24	4.167

Illuminator	Part Number
AUX-100	AS-02737-000
ETHS-100	ETHS-100
HES-100	AS-03014-100
HIS-100	AS-03015-100
IHLS-100-100	AS-02631-100
ITHS-100-100	ITHS-100-100

Watts	Volts	Amps
120	17.5	6.860

Illuminator	Part Number
EHLS-100-120D	AS-02640-120

Watts	Volts	Amps
120	18.2	6.600

Illuminator	Part Number
KI-120	AS-02509-100

Watts	Volts	Amps
150	24	6.250

Illuminator	Part Number
ETHS-150	ETHS-150
HES-150	AS-03014-150
HIS-150	AS-03015-150
IHLS-100-150	AS-02576-150

# LPS-525-42 Specifications

**System** LPS-525-42  
 Part Number: AS-03158-525

## SUMMARY

Maximum Current: (Amps) 13  
 Maximum Voltage: (Volts) 42  
 Maximum Power: (Watts) 525  
 Operating Range: See chart

## SETPOINT

### Current

Range: (Amps) 0 - 13  
 Resolution: (Amps) 0.001  
 Accuracy, Operating Points: 0.025% + 0.0033  
 ( $\pm$ [% set + A])<sup>1</sup>  
 Accuracy, Full Range: 0.05% + 0.0065  
 ( $\pm$ [% set + A])<sup>2</sup>  
 Stability: (ppm, time) <50, 1 hour  
 Temperature Coeff: (ppm/°C) <50  
 Noise/Ripple: (mA rms) <1  
 Transients: (mA) <1  
 Compliance Voltage: (V) 42

### Voltage

Range: (V) 0 - 42  
 Resolution: (V) 0.01  
 Accuracy: ( $\pm$ [% set + V]) 0.05% + 0.021  
 Stability: (ppm, time) <50, 1 hour  
 Temperature Coeff: (ppm/°C) <100

## MEASUREMENT

### Current

Resolution: (mA) 0.001  
 Accuracy: ( $\pm$ [% reading + mA]) 0.025% + 0.0033

### Voltage

Resolution: (V) 0.01  
 Accuracy: ( $\pm$ [% reading + V]) 0.025% + 0.011

## LIMITS

### Current

Resolution: (A) 0.01  
 Accuracy: ( $\pm$ A) 0.1

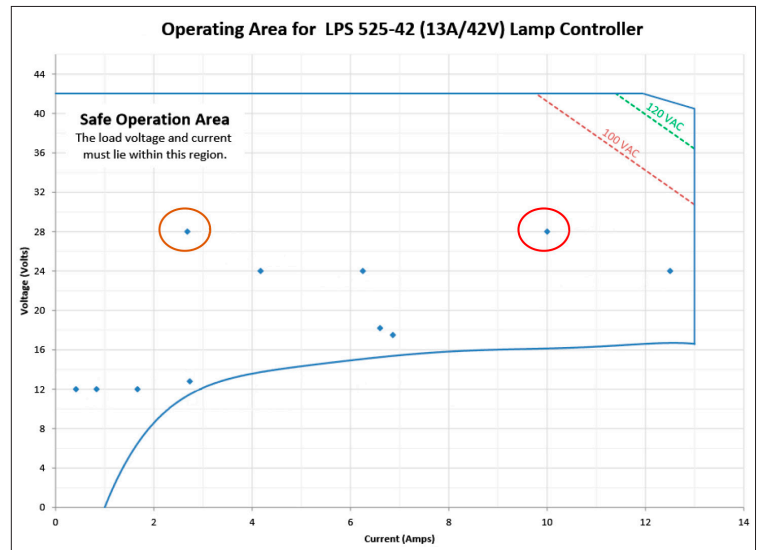
### Voltage

Resolution: (V) 0.1  
 Accuracy: ( $\pm$ V) 0.4

<sup>1</sup> Accuracy specified at up to 12 pre-defined operating points.

<sup>2</sup> Accuracy across entire operating range.

# LPS-525-42 Operating Envelope



Can be programmed to operate any DC lamp in this power envelope.

## Labsphere Lamps Operable with LPS-525-42

Watts	Volts	Amps
75	28	2.680
Illuminator	Part Number	
2PI-1-INT-1400 Lamp	AS-80004-000	
AUX-1400	AS-02986-140	
ISC-1400	AS-02910-001	
SCL-1400	AS-01342-000	