

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

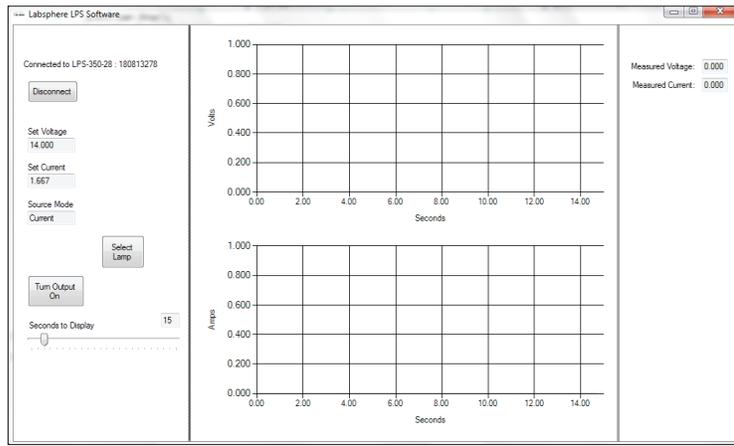
- Lamps
- Lamp cables

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



OUTPUT

The 7-pin CPC connector provides the electrical connections to the lamp (except interlock).

Pin	Description	Pin	Description
1	Sense+	5	Power-
2	Sense-	6	Fan+
3	Power+	7	Fan-
4	Earth Ground		

LPS-175-27 Specifications

Model Number:	LPS-175-27
Order 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: (\pm [% set + A]) ¹	0.025% + 0.0021
Accuracy, Full Range: (\pm [% set + A]) ²	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: (\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% + 0.0021

Voltage

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

LIMITS

Current

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

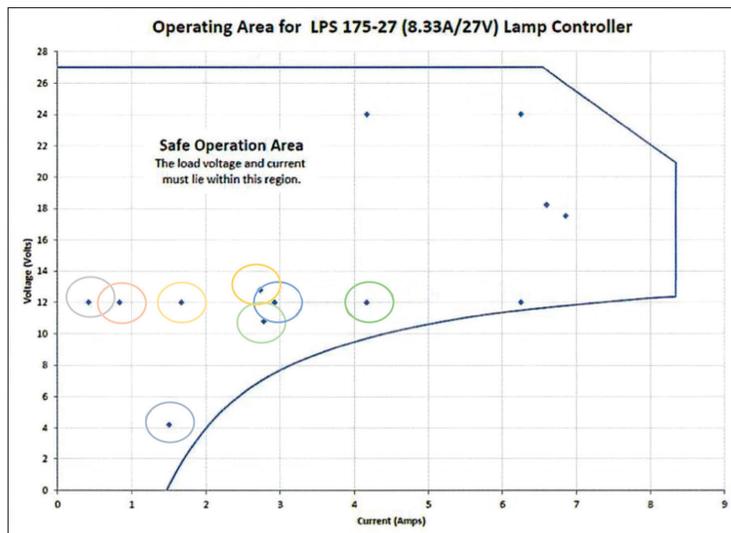
Voltage

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

¹ Accuracy specified at up to 12 pre-defined operating points.

² 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	Order 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	Order 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	Order Number	
AUX-10*	AS-02631-010	
ETHS-10*	ETHS-10	
HIS-010	AS-03015-010	
ITHS-100-10*	ITHS-100-10	

* Legacy

Watts	Volts	Amps
20	12	1.667
Illuminator	Order 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	Order Number	
IHLS-100-30*	AS-02576-030	

Watts	Volts	Amps
30	12	2.500
Illuminator	Order Number	
HIS-030	AS-03015-030	
ITHS-100-30*	ITHS-100-30	

Watts	Volts	Amps
35	12	2.917
Illuminator	Order Number	
EHLS-100-35R*	AS-02630-035	
HIS-035*	AS-03015-035	
AUX-35*	AS-02639-000	

Watts	Volts	Amps
35	12	2.600
Illuminator	Order Number	
2PI-1-INT-600* Lamp	AS-80003-000	
ICS-600*	AS-02910-000	

Watts	Volts	Amps
35	12	2.955
Illuminator	Order Number	
AUX-650	AS-02986-650	
SCL-650	AS-01335-100	
2PI-1-INT-650 Lamp	AS-80003-100	

Watts	Volts	Amps
50	12	4.167
Illuminator	Order 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	



Advancing the Technology of Light: Measure. Create. Reflect.

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LPS-350-28 Specifications

Model Number: LPS-350-28
Order 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])¹
 Accuracy, Full Range: 0.05% + 0.0065
 (\pm [% set + A])²
 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

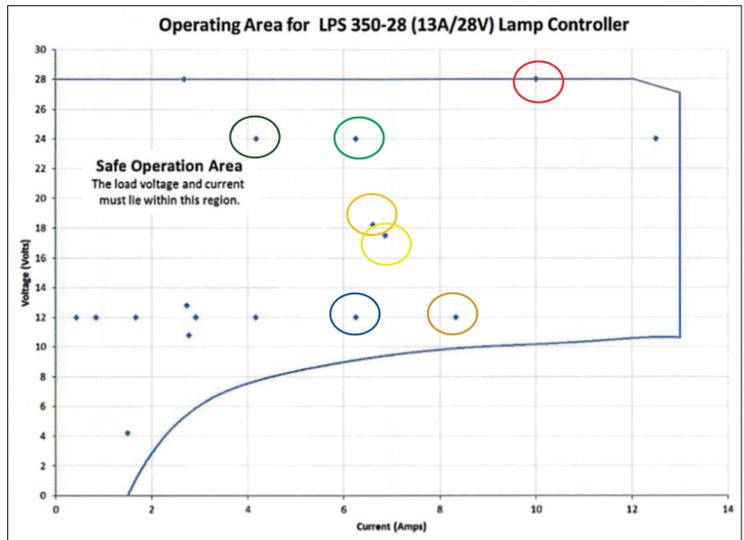
Voltage

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

¹ Accuracy specified at up to 12 pre-defined operating points.

² 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		Order 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		Order Number
FFS-100-1000		AS-02768-200
IHLS-100-100*, 12V		AS-02576-100
EHLS-100-100R*		AS-02630-100
AUX-100*		AS-02737-000
HES-100		AS-03014-100
HIS-100		AS-03015-100
IHLS-100-100*		AS-02631-100

Watts	Volts	Amps
100	24	4.167
Illuminator		Order Number
ETHS-100*		ETHS-100
ITHS-100-100*		ITHS-100-100

* Legacy

Watts	Volts	Amps
120	17.5	6.860
Illuminator		Order Number
EHLS-100-120D*		AS-02640-120

Watts	Volts	Amps
120	18.2	6.600
Illuminator		Order Number
KI-120		AS-02509-100

Watts	Volts	Amps
150	24	6.250
Illuminator		Order 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

Model Number: LPS-525-42
Order 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])¹
 Accuracy, Full Range: 0.05% + 0.0065
 (\pm [% set + A])²
 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

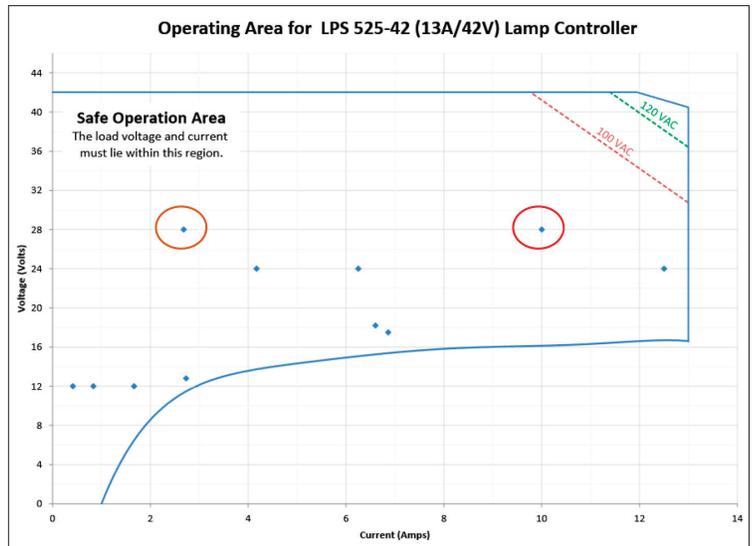
Voltage

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

¹ Accuracy specified at up to 12 pre-defined operating points.

² 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	2.679
Illuminator		Order Number
2PI-1-INT-1400 Lamp		AS-80004-000
AUX-1400		AS-02986-140
ISC-1400		AS-02910-001
SCL-1400		AS-01342-000