

	OFFIC	E USE ONLY
APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #:	OSP - 0496 - 10
OSHPD Special Seismic Certification Preapproval (OSP)		
Type: 🛛 New 🗌 Renewal		
Manufacturer Information		
Manufacturer: Myers Power Products, Inc.		
Manufacturer's Technical Representative: Bruce Steigerwald		
Mailing Address: 44 South Commercial Way, Bethlehem, PA 18017		
Telephone: 610.868.3500 Email: bruce.	steigerwald@myerspow	/er.com
Product Information		
Product Name: Illuminator Series LV		
Product Type: Lighting Inverter System		
Product Model Number: Various (See Attachment) (List all unique product identification numbers and/or part numbers) General Description: Emergency Lighting Inverter System. Seismic and modifications required to address the anomalies observed during the test Mounting Description: Rigid Floor Mounted, Flush & Recess Wall Mounting	sts shall be incorporated in	
Applicant Information		
Applicant Company Name: SEEStudio, Inc.		
Contact Person: _ Dan Junker, SE		
Mailing Address: <u>1281 9th Ave. san Diego, CA 92101, Suite 1101</u>		
Telephone: 619.606.5058 Email: djunke	r@seestudioinc.com	_
I hereby agree to reimburse the Office of Statewide Health R accordance with the California Administrative Code, 2016. Signature of Applicant:	Planning and Develo	
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs" STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)	MMM	OSHPD Page 1 of 3



California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)						
Company Name: SEEStudio, Inc.						
Name: Dan Junker, SE California License Number: S6178						
Mailing Address: 1281 9th Ave. san Diego, CA 92101, Suite 1101						
Telephone: 619.606.5058 Email: djunker@seestudioinc.com						
Supports and Attachments Preapproval						
 Supports and attachments are preapproved under OPM- (Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required) Supports and attachments are not preapproved 						
Certification Method						
 Testing in accordance with: ICC-ES AC156 Other (Please Specify):						
Testing Laboratory						
Company Name: Clark Dynamic Test Laboratory, Inc.						
Contact Name: Robert Francis, General Manager						
Mailing Address: _ 1801 Route 51 Jefferson Hills, PA 15025						

Telephone: 412-387-1004 Email: rfrancis@clarktesting.com

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)

Page 2 of 3

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Seismic Parameters
Design in accordance with ASCE 7-10 Chapter 13: 🖂 Yes 🔲 No
Design Basis of Equipment or Components (Fp/Wp) = 1.44
S_{DS} (Design spectral response acceleration at short period, g) = 2.0
a_p (In-structure equipment or component amplification factor) = <u>1.0</u>
R_{P} (Equipment or component response modification factor) = 2.5
Ω_0 (System overstrength factor) = 2.0
I_p (Importance factor) = 1.5
z/h (Height factor ratio) =1.0
Equipment or Component Natural Frequencies (Hz) = See Attachment
Overall dimensions and weight (or range thereof) = See Attachment
Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: 🗌 Yes 🛛 No
Design Basis of Equipment or Components (V/W) =
S _{DS} (Design spectral response acceleration at short period, g) =
S _{D1} (Design spectral response acceleration at 1 second period, g) =
R (Response modification coefficient) =
Ω_0 (System overstrength factor) =
C _d (Deflection amplification factor) =
I_p (Importance factor) = 1.5
Height to Center of Gravity above base =
Equipment or Component Natural Frequencies (Hz) =
Overall dimensions and weight (or range thereof) =
Tank(s) designed in accordance with ASME BPVC, 2015: 🗌 Yes 🖾 No
List of Attachments Supporting Special Seismic Certification
 Test Report(s) Drawings Calculations Manufacturer's Catalog Other(s) (Please Specify): SEES Certified Component Summary
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022
Signature: Afre Date: March 13, 2017
Print Name: Ali Sumer Title: DSE Special Seismic Certification Valid Up to : SDS (g) = 2.0 z/h = 1.0
Condition of Approval (if applicable):
*Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15) Page 3 of 3

"A



SPECIAL SEISMIC CERTIFICATION

CERTIFIED COMPONENTS

MANUFACTURER: Myers Power Products, Inc.

MODEL LINE: Illuminator Series LV

TABLE DESCRIPTION: Lighting Inverters

CONSTRUCTION SUMMARY:

Powder-coated cold-rolled carbon steel enclosure. Hardware secured cover. Certified unit construction shall be identical to cabinet construction of UUT's.

OPTIONS SUMMARY:

Internal components as detailed in following Certified Sub-Component tables.

TABLE **1**

	CERTIFICATION PARAMETERS:
cover. Certified unit construction shall	Building Code: CBC 2016
	Component Importance Factor: $I_p = 1.5$
t tables.	S _{DS} at z/h = 1.0: S _{DS} = 2.0g

NOTES:

MOUNTING SUMMARY:

Rigid floor mounted or rigid wall mounted per below table. Unit anchorage shall be designed on a project specific basis by SEOR. Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Model Line Model			Max I	Dimension	s (in)	Weight	De	scription	
woder Line	ile Model		Depth	Width	Height	(lb)	VA	Voltage	UUT
	Recessed wall mount	LV-1	6.50	14.25	17.75	55.0	175	120/277V	1
		LV-1	6.50	14.25	17.75	55.0	175	120/277V	2
	Flush wall mount	LV-2	9.25	19.00	22.00	111.0	350	120/277V	
Illuminator Series	Flush wan mount	LV-3	9.25	19.00	22.00	136.0	550	120/277V	
LV		LV-4	9.25	25.25	22.00	188.0	750	120/277V	3
		LV-2	9.25	19.00	22.00	111.0	350	120/277V	
	Floor mount	LV-3	9.25	19.00	22.00	136.0	550	120/277V	4
		LV-4	9.25	25.25	22.00	188.0	750	120/277V	5



SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

MANUFACTURER: Myers Power Products, Inc.

MODEL LINE: Illuminator Series LV

 TABLE DESCRIPTION:
 Transformers, Subassemblies, Batteries, Circuit Breakers, PCB's

CONSTRUCTION SUMMARY:

OPTIONS SUMMARY:

TABLE **2**

CERTIFICATION PARAMETERS:
Building Code: CBC 2016
Component Importance Factor: $I_p = 1.5$
S _{DS} at z/h = 1.0: S _{DS} = 2.0g
NOTES:

MOUNTING SUMMARY:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Manufacturer	Model	Description	UUT
		XF-FM115055		1,2
Main Transformers	Colour	XF-FM115054	Componentindingo	
Main Transformers	Galaxy	XF-FM115053	Copper windings	4
		XF-FM115063		3,5
		SA-404227-xx		1,2
AC Subassembly Inverter Module	Myers Power Products, Inc.	SA-404228-xx		4
inverter wodule	Products, Inc.	SA-404229-xx		3,5
Detteries	Genesis	NP33-12		1,2,4
Batteries	CSB	GP12340		3,5
Power Module Circuit Board	Precision Graphics	DCD 40 44 25		1,3
Power Module Circuit Board	Teamwise	PCB404125xxx		2,4,5
Control Circuit Board	Precision Graphics	DCD 40 44 20		1,3,4
	Teamwise	PCB404128xxx		2,5
	Precision Graphics	505404474		1,3,4
Indicator/Test Circuit Board	Teamwise	PCB404174xxx		2,5
Circuit Drocker Circuit Decad	Precision Graphics	DCD 40 44 70		3,4
Circuit Breaker Circuit Board	Teamwise	PCB404178xxx		5
	CBI	C-Frame MKIV		3,4,5
Circuit Breaker	Тусо	W67 Series		3,5
	Precision Graphics	DCD 40 44 74		1,3,4
System Metering Circuit Board	Teamwise	PCB404171xxx		2,5
	Precision Graphics	DCD4042025		1,3
USB Storage Circuit Board	Teamwise	PCB404203xxx		2,4
Ethernet Communication Circuit Board	Texas Instruments	PCB404348xxx		4

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SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

MANUFACTURER: Myers Power Products, Inc.

MODEL LINE: Illuminator Series LV

 TABLE DESCRIPTION:
 Transformers, Subassemblies, Batteries, Circuit Breakers, PCB's

CONSTRUCTION SUMMARY:

OPTIONS SUMMARY:

TABLE **2**

CERTIFICATION PARAMETERS:
Building Code: CBC 2016
Component Importance Factor: $I_p = 1.5$
S _{DS} at z/h = 1.0: S _{DS} = 2.0g
NOTES:

MOUNTING SUMMARY:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

Sub-Component	Manufacturer	Model	Description	UUT
BACnet Communication Circuit Board	Precision Graphics	PCB404303xxx		3
	Teamwise	PCD404505XXX		5
System Display Circuit Deard	Precision Graphics	PCB404158xxx		1,3,4
System Display Circuit Board	Teamwise	PCD404136XXX		2,5
Input/Output Relay Circuit Board	Precision Graphics	PCB404165xxx		1
	Teamwise	PCB404270xxx		2



conditions.

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **1**

Myers Power Products, Inc. **MANUFACTURER:**

MODEL LINE: Illuminator Series LV

LV-1 **MODEL NUMBER:**

CONSTRUCTION SUMMARY:	TEST PARAMETERS:
Powder-coated cold-rolled carbon steel enclosure. Hardware secured cover.	
OPTIONS SUMMARY:	Building Code: CBC 2016
Galaxy XF-FM115055 Transformer, Myers Power Products SA-404227-xx Subassembly, Genesis NP33-12 Batteries, Precision Graphics PCB404125xxx Power Module Circuit Board, Precision Graphics PCB404128xxx Control Circuit Board, Precision Graphics PCB404174xxx Indicator/Test Circuit Board, Precision Graphics PCB404171xxx System Metering Circuit Board, Precision Graphics PCB404158xxx System Display Circuit Board, Precision Graphics Input/Output Relay Circuit Board	Component Importance Factor : I _p = 1.5 Test Criteria: AC-156
MOUNTING SUMMARY:	NOTES:
Rigid recess wall mount. Unit mounted to wall mount fixture using four (4) 1/2"-20 grade 5 hex head bolts,	Contents were included in testing per operating

Rigid recess wall mount. Unit mounted to wall mount fixture using four (4) 1/2"-20 grade 5 hex head bolts, washers, and lock washers.

UUT IMAGE



UUT PROPERTIES

	Dimensions (ir	1)	Maight (lb)	F	irst Natural Frequency	(Hz)
Depth	Width	Height	Weight (lb)	F-B	S-S	Vert
6.50	14.25	17.75	55	N/A	N/A	>33.3

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

S _{DS} (g)	z/h	A _{FLX-H} (g)	А _{RIG-Н} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

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Contents were included in testing per operating

conditions.

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **2**

Myers Power Products, Inc. **MANUFACTURER:**

MODEL LINE: Illuminator Series LV

LV-1 **MODEL NUMBER:**

CONSTRUCTION SUMMARY:	Test Parameters:
Powder-coated cold-rolled carbon steel enclosure. Hardware secured cover.	
OPTIONS SUMMARY:	Building Code: CBC 2016
Galaxy XF-FM115055 Transformer, Myers Power Products SA-404227-xx Subassembly, Genesis NP33-12 Batteries, Teamwise PCB404125xxx Power Module Circuit Board, Teamwise PCB404128xxx Control Circuit Board, Teamwise PCB404174xxx Indicator/Test Circuit Board, Teamwise PCB404171xxx System Metering Circuit Board, Teamwise PCB404203xxx USB Storage Circuit Board, Teamwise PCB404158xxx System Display Circuit Board, Teamwise Input/Output Relay Circuit Board	Component Importance Factor: I _p = 1.5 Test Criteria: AC-156
MOUNTING SUMMARY:	NOTES:

Μουντ

Rigid flush wall mount. Unit mounted to wall mount fixture using four (4) 1/2"-20 grade 5 hex head bolts, washers, and lock washers.

UUT IMAGE



UUT PROPERTIES

Dimensions (in)		Moight (lb)	First Natural Frequency (Hz)			
Depth	Width	Height	Weight (lb)	F-B	S-S	Vert
9.25	19.00	22.00	111	N/A	N/A	25.5

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

S _{DS} (g)	z/h	А _{FLX-Н} (g)	А _{RIG-Н} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

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SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION



MANUFACTURER: Myers Power Products, Inc.

MODEL LINE: Illuminator Series LV

MODEL NUMBER: LV-4

 CONSTRUCTION SUMMARY:
 TEST PARAMETERS:

 Powder-coated cold-rolled carbon steel enclosure. Hardware secured cover.
 OPTIONS SUMMARY:

 Galaxy XF-FM115063 Transformer, Myers Power Products SA-404229-xx Subassembly, CSB GP12340
 Building Code: CBC 2016

 Galaxy XF-FM115063 Transformer, Myers Power Products SA-404229-xx Subassembly, CSB GP12340
 Component Importance Factor: Ip = 1.5

 Batteries, Precision Graphics PCB404125xxx Power Module Circuit Board, Precision Graphics PCB404128xxx
 Component Importance Factor: Ip = 1.5

 Control Circuit Board, Precision Graphics PCB404174xxx Indicator/Test Circuit Board, Precision Graphics PCB404348xxx Ethernet Communication
 Test Criteria: AC-156

MOUNTING SUMMARY:

Rigid flush wall mount. Unit mounted to wall mount fixture using four (4) 5/16"-18 grade 5 hex head bolts, washers, and lock washers.

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

	Dimensions (in)		Dimensions (in)			F	irst Natural Frequency	(Hz)
Depth	Width	Height	Weight (lb)	F-B	S-S	Vert		
9.25	25.25	22.00	188	N/A	N/A	12.7		

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

S _{DS} (g)	z/h	А _{FLX-Н} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

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Contents were included in testing per operating

conditions.

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION



Myers Power Products, Inc. **MANUFACTURER:**

MODEL LINE: Illuminator Series LV

LV-3 **MODEL NUMBER:**

CONSTRUCTION SUMMARY:	Test Parameters:
Powder-coated cold-rolled carbon steel enclosure. Hardware secured cover.	
OPTIONS SUMMARY:	Building Code: CBC 2016
Galaxy XF-FM115053 Transformer, Myers Power Products SA-404228-xx Subassembly, Genesis NP33-12 Batteries, Teamwise PCB404125xxx Power Module Circuit Board, Precision Graphics PCB404128xxx Control Circuit Board, Precision Graphics PCB404174xxx Indicator/Test Circuit Board, Precision Graphics PCB404178xxx Circuit Breaker Circuit Board, CBI C-Frame MKIV Circuit Breaker, Precision Graphics PCB404171xxx System Metering Circuit Board, Teamwise PCB404348xxx Ethernet Communications Circuit Board, Precision Graphics PCB404158xxx System Display Circuit Board	Component Importance Factor: I _p = 1.5 Test Criteria: AC-156
MOUNTING SUMMARY:	Notes:

MOUNTING SUMMARY:

Rigid floor mount. Unit mounted to shake table platen using four (4)5/8"-11 grade 5 hex head bolts, washers, and lock washers.

UUT IMAGE



UUT PROPERTIES

Dimensions (in)			Moight (lb)	First Natural Frequ		(Hz)
Depth	Width	Height	Weight (lb)	F-B	S-S	Vert
9.25	19.00	22.00	111	23.9	24.8	>33.3

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

S _{DS} (g)	z/h	А _{FLX-Н} (g)	А _{RIG-Н} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

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TEST PARAMETERS:

Building Code: CBC 2016

Test Criteria: AC-156

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION



MANUFACTURER: Myers Power Products, Inc.

MODEL LINE: Illuminator Series LV

MODEL NUMBER: LV-4

CONSTRUCTION SUMMARY:

Powder-coated cold-rolled carbon steel enclosure. Hardware secured cover.

OPTIONS SUMMARY:

Galaxy XF-FM115063 Transformer, Myers Power Products SA-404229-xx Subassembly, CSB GP12340 Batteries, Teamwise PCB404125xxx Power Module Circuit Board, Teamwise PCB404128xxx Control Circuit Board, Teamwise PCB404174xxx Indicator/Test Circuit Board, Teamwise PCB404178xxx Circuit Breaker Circuit Board, CB IC-Frame MKIV Circuit Breaker, Tyco W67 Series Circuit Breaker, Teamwise PCB404171xxx System Metering Circuit Board, Teamwise PCB404203xxx USB Storage Circuit Board, Teamwise PCB404158xxx System Display Circuit Board

NOTES:

Contents were included in testing per operating conditions.

Component Importance Factor: Ip = 1.5

MOUNTING SUMMARY:

Rigid floor mount. Unit mounted to shake table platen using four (4)5/8"-11 grade 5 hex head bolts, washers, and lock washers.

UUT IMAGE



UUT PROPERTIES

Dimensions (in)			Maight (lb)	First Natural Freq		(Hz)
Depth	Width	Height	Weight (lb)	F-B	S-S	Vert
9.25	25.25	22.00	188	23.9	24.8	>33.3

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

S _{DS} (g)	z/h	А _{ғіх-н} (g)	А _{RIG-Н} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

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