



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0787

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Corning Optical Communications

Manufacturer's Technical Representative: John Hollister

Mailing Address: 4200 Corning Place, Charlotte, NC 28216

Telephone: (571) 428-6812

Email: HollisteJE@corning.com

Product Information

Product Name: Internal Communication Servers and Routers

Product Type: Wireless Communication Systems

Product Model Number: Everon 6200 DAS

General Description: Distributed antenna systems including access unit, expansion units, power supplies, low-power remotes, and medium-power remotes.

Mounting Description: See Certified Product Tables

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: Manwill Engineering LLC

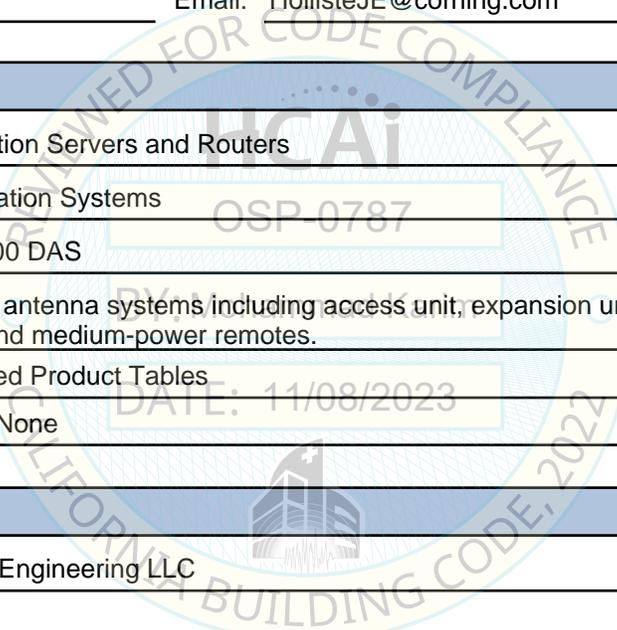
Contact Person: Derek Manwill

Mailing Address: PO Box 1194, Bend, OR 97709

Telephone: (541) 241-2102

Email: derek@manwillse.com

Title: President





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California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: MANWILL ENGINEERING LLC
Name: Derek Manwill California License Number: S6266
Mailing Address: PO Box 1194, Bend, OR 97709
Telephone: (541) 241-2102 Email: derek@manwillse.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
 Other (Please Specify): _____

Testing Laboratory

Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)
Contact Person: Jeremy Lange
Mailing Address: 11034 Indian Trail, Dallas TX 75229-3513
Telephone: (972) 247-9657 Email: Jeremy@etldallas.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.44 (SDS=2.00, z/h=1), 1.13 (SDS=2.50, z/h=0)

SDS (Design spectral response acceleration at short period, g) = 2.00 (z/h=1), 2.50 (z/h=0)

a_p (Amplification factor) = 1.0

R_p (Response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

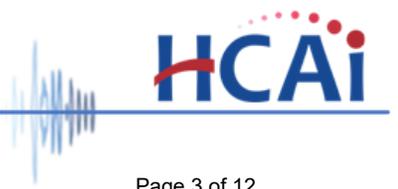
HCAI Approval (For Office Use Only) - Approval Expires on 11/08/2029

Date: 11/8/2023

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = See Above z/h = See Above

Condition of Approval (if applicable): DATE: 11/08/2023



**CORNING OPTICAL COMMUNICATIONS
Everon 6200 DAS**

TABLE 1 - Rack Mounted						
Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Server Rack for Mounting Equipment						
Chatsworth Rack 13855-703	15.0	24.0	84.0	533	Wt. incl. rack, vert C.G.=43in	UUT 1
Mounting: Rigid floor mounted Chatsworth 13855-703 rack. Use identical rack with a C.G. less than the listed C.G. above.				Seismic Levels:	$S_{DS} = 2.00g$ for $z/h = 1$ $S_{DS} = 2.50g$ for $z/h = 0$	$I_p = 1.5$
Product Construction: Carbon steel rack. Frame only, doors/panels/accessories of the rack are not certified.						
Options/Subcomponents: Rack may contain any combination of subcomponents listed in Table 4. Total weight and C.G. must be less than values listed above.						

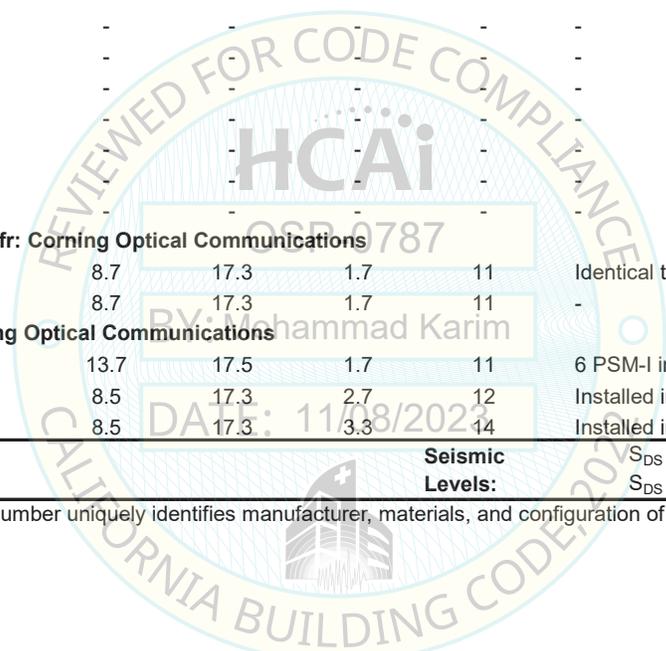
TABLE 2 - Ceiling Mounted						
Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Ceiling Enclosure for Mounting Equipment						
Chatsworth Oberon 1074-N3RU	23.8	23.8	4.5	40	Wt. incl. enclosure	UUT 7,8
Mounting: Ceiling suspended Chatsworth Oberon 1074-N3RU enclosure. Use identical enclosure with a single remote installed.				Seismic Levels:	$S_{DS} = 2.00g$ for $z/h = 1$ $S_{DS} = 2.50g$ for $z/h = 0$	$I_p = 1.5$
Product Construction: Carbon steel enclosure.						
Options/Subcomponents: Enclosure may contain one E62-N3 or SCR-N-620 subcomponent listed in Table 5.						

TABLE 3 - Wall Mounted						
Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
M3RU Remote						
E62-M3-AC-1-25	4.5	10.2	14.2	24	-	EXTRAP
E62-M3-AC-3537	4.5	10.2	14.2	24	-	UUT 2
E62-M3-L-SISO-AC	5.7	16.9	12.3	43	-	UUT 3
PSU6 & CIP Power Supply						
PSU6-1U	1.7	13.7	17.5	11	6 PSM-I installed	UUT 6
CIP-16-56V	2.7	17.3	8.5	12	-	UUT 4
CIP-32-56V	3.3	17.3	8.5	14	-	UUT 5
Mounting: Rigid Wall Mounted				Seismic Levels:	$S_{DS} = 2.00g$ for $z/h = 1$ $S_{DS} = 2.50g$ for $z/h = 0$	$I_p = 1.5$
Product Construction/Options/Subcomponents: Construction, options, and subcomponents are uniquely identified by the model number.						

**CORNING OPTICAL COMMUNICATIONS
Everon 6200 DAS**

TABLE 4. SUBCOMPONENTS (Rack Mount)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: E62-A3 Access Unit Chassis - Mfr: Corning Optical Communications						
SCSH-5000-AC	13.0	17.3	3.5	18	Identical to A3 except software	IDENTICAL
E62-A3-4-AC	13.0	17.3	3.5	18	Weight includes modules	UUT 1
Type: E62-A3 Module - Mfr: Corning Optical Communications						
E62-SFP28-10-DS-2	-	-	-	-	-	UUT 1
E62-AU-AC-M700LUPS	-	-	-	-	-	UUT 1
E62-AU-AC-M850E	-	-	-	-	-	UUT 1
E62-AU-AC-M1900	-	-	-	-	-	UUT 1
E62-AU-AC-M2100A	-	-	-	-	-	UUT 1
E62-AU-AC-M2300	-	-	-	-	-	INTERP
E62-AU-AC-M2500T	-	-	-	-	-	UUT 1
E62-A3-AC-N78-1	-	-	-	-	-	UUT 1
E62-A3-AC-N77-1	-	-	-	-	-	UUT 1
Type: E62-E3 Expansion Unit - Mfr: Corning Optical Communications						
SCSE-5000-AC	8.7	17.3	1.7	11	Identical to E3 except software	IDENTICAL
E62-E3-O-14-AC	8.7	17.3	1.7	11	-	UUT 1
Type: Power Supply - Mfr: Corning Optical Communications						
PSU6-1U	13.7	17.5	1.7	11	6 PSM-I installed	UUT 1
CIP-16-56V	8.5	17.3	2.7	12	Installed in CIP-19SHELF-1.5U	UUT 1
CIP-32-56V	8.5	17.3	3.3	14	Installed in CIP-19SHELF-2U	UUT 1
Mounting: Mounted within unit.				Seismic Levels:		$S_{DS} = 2.00g$ for $z/h = 1$ $S_{DS} = 2.50g$ for $z/h = 0$
Construction/Options: Model number uniquely identifies manufacturer, materials, and configuration of subcomponents.						



**CORNING OPTICAL COMMUNICATIONS
Everon 6200 DAS**

TABLE 5. SUBCOMPONENTS (Ceiling Mount)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: N3RU Remote - Mfr: Corning Optical Communications						
SCRN-620-77770266	12.2	12.2	3.3	10	Identical to N3RU except software	IDENTICAL
SCRN-620-77770566	12.2	12.2	3.3	10	Identical to N3RU except software	IDENTICAL
SCRN-620-77771366	12.2	12.2	3.3	10	Identical to N3RU except software	IDENTICAL
E62-N3-2-17192537-I	12.2	12.2	3.3	10	-	UUT 7
E62-N3-2-17192537-E	12.2	12.2	3.3	10	-	INTERP
E62-N3-2-1719-4-37-I	12.2	12.2	3.3	10	-	INTERP
E62-N3-2-1719-4-37-E	12.2	12.2	3.3	10	-	INTERP
E62-N3-4-3537-I	12.2	12.2	3.3	10	-	INTERP
E62-N3-4-3537-E	12.2	12.2	3.3	10	-	INTERP
E62-N3-2-17193537-I	12.2	12.2	3.3	10	-	INTERP
E62-N3-2-17193537-E	12.2	12.2	3.3	10	-	INTERP
E62-N3-2-7F253537-I	12.2	12.2	3.3	10	-	INTERP
E62-N3-LM2537-2-35-I	12.2	12.2	3.3	10	-	INTERP
E62-N3-LM2535-2-37-I	12.2	12.2	3.3	10	-	UUT 8

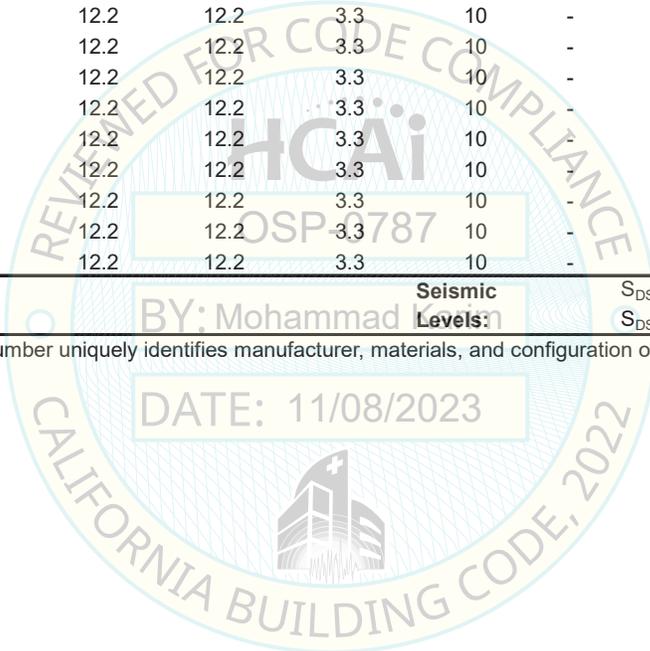
Mounting: Mounted within unit.

Seismic Levels:

$S_{DS} = 2.00g$ for $z/h = 1$
 $S_{DS} = 2.50g$ for $z/h = 0$

$I_p = 1.5$

Construction/Options: Model number uniquely identifies manufacturer, materials, and configuration of subcomponents.



UUT 1

Manufacturer: CORNING OPTICAL COMMUNICATIONS
 Model number: Chatsworth Rack 13855-703
 Unit function: WIRELESS COMMUNICATION SYSTEMS
 Serial number: N/A



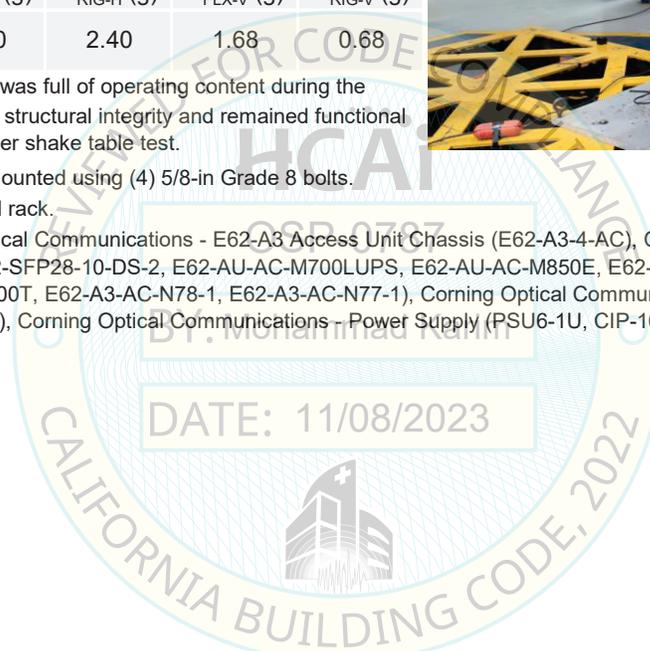
Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
15.0	24.0	84.0	533	11.4	8.1	>33.3

Code & criteria: 2022 CBC, ICC-ES AC156
 Test laboratory: ENVIRONMENTAL TESTING LABORATORY
 Report: 23082TR1.0 (dated 10-13-23), tested on 10-10-23

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1	3.20	2.40	1.68	0.68
2.50	0				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

- Mounting: Rigid floor mounted using (4) 5/8-in Grade 8 bolts.
- Construction: Carbon steel rack.
- Subcomponents: Corning Optical Communications - E62-A3 Access Unit Chassis (E62-A3-4-AC), Corning Optical Communications - E62-A3 Module (E62-SFP28-10-DS-2, E62-AU-AC-M700LUPS, E62-AU-AC-M850E, E62-AU-AC-M1900, E62-AU-AC-M2100A, E62-AU-AC-M2500T, E62-A3-AC-N78-1, E62-A3-AC-N77-1), Corning Optical Communications - E62-E3 Expansion Unit (E62-E3-O-14-AC), Corning Optical Communications - Power Supply (PSU6-1U, CIP-16-56V, CIP-32-56V).
- Testing notes: None.

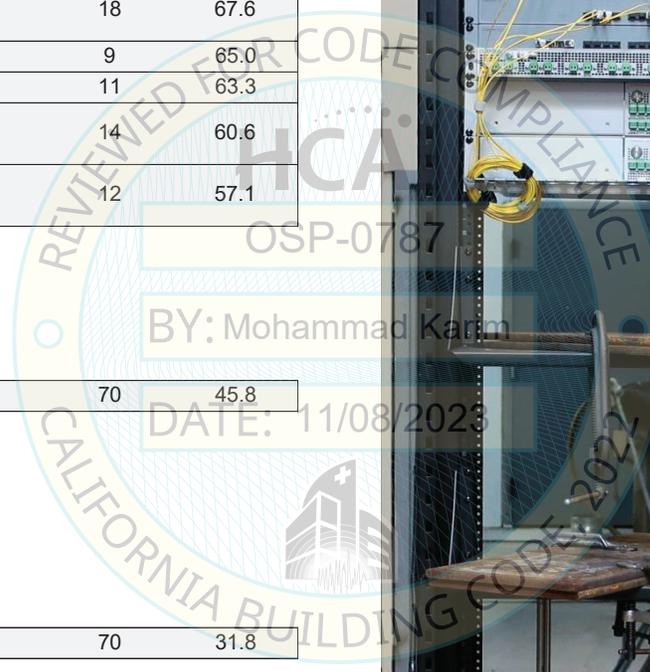


UUT 1 - RACK CONFIGURATION

RU	Subcomponent	Weight, lb	CG, in
44			
43			
42	E62-A3-4-AC	18	76.4
41			
40	E62-A3-4-AC	18	72.9
39			
38	E62-E3-O-14-AC	11	70.3
37			
36	E62-A3-4-AC	18	67.6
35	E62-E3-O-14-AC	9	65.0
34	PSU6-1U	11	63.3
33			
32	CIP-32-56V	14	60.6
31			
30	CIP-16-56V	12	57.1
29			
28			
27			
26			
25			
24	Added weight	70	45.8
23			
22			
21			
20			
19			
18			
17			
16	Added weight	70	31.8
15			
14			
13			
12			
11			
10	Added weight	35	21.3
9			
8			
7			
6			
5			
4			
3	Added weight	35	9.0
2			
1			



CG of unit = 43 inches from bottom. Total height = 84in.



ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 2

Manufacturer: CORNING OPTICAL COMMUNICATIONS
 Model number: E62-M3-AC-3537
 Unit function: WIRELESS COMMUNICATION SYSTEMS
 Serial number: 3623110065

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
4.5	10.2	14.2	24	N/A	N/A	N/A

Code & criteria: 2022 CBC, ICC-ES AC156
 Test laboratory: ENVIRONMENTAL TESTING LABORATORY
 Report: 23082TR1.0 (dated 10-13-23), tested on 10-10-23

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1	3.20	2.40	1.68	0.68
2.50	0				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid wall mounted using (4) 3/8-in Grade 8 bolts. Fixture is rigid mounted to table.
 Construction: Construction uniquely identified by model number.
 Subcomponents: None.
 Testing notes: None.



UUT 3

Manufacturer: CORNING OPTICAL COMMUNICATIONS
 Model number: E62-M3-L-SISO-AC
 Unit function: WIRELESS COMMUNICATION SYSTEMS
 Serial number: 362319000A

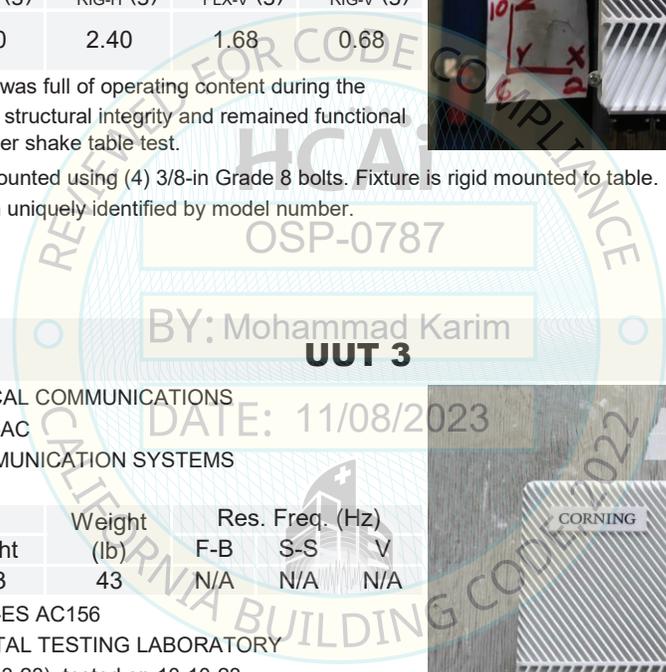
Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
5.7	16.9	12.3	43	N/A	N/A	N/A

Code & criteria: 2022 CBC, ICC-ES AC156
 Test laboratory: ENVIRONMENTAL TESTING LABORATORY
 Report: 23082TR1.0 (dated 10-13-23), tested on 10-10-23

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1	3.20	2.40	1.68	0.68
2.50	0				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid wall mounted using (4) 3/8-in Grade 8 bolts. Fixture is rigid mounted to table.
 Construction: Construction uniquely identified by model number.
 Subcomponents: None.
 Testing notes: None.



UUT 4

Manufacturer: CORNING OPTICAL COMMUNICATIONS
 Model number: CIP-16-56V
 Unit function: WIRELESS COMMUNICATION SYSTEMS
 Serial number: 3421500051

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
2.7	17.3	8.5	12	N/A	N/A	N/A

Code & criteria: 2022 CBC, ICC-ES AC156
 Test laboratory: ENVIRONMENTAL TESTING LABORATORY
 Report: 23082TR1.0 (dated 10-13-23), tested on 10-10-23

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1	3.20	2.40	1.68	0.68
2.50	0				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid wall mounted using (4) 3/8-in Grade 8 bolts with square plate washers. Fixture is rigid mounted to table.
 Construction: Construction uniquely identified by model number.
 Subcomponents: None.
 Testing notes: None.



UUT 5

Manufacturer: CORNING OPTICAL COMMUNICATIONS
 Model number: CIP-32-56V
 Unit function: WIRELESS COMMUNICATION SYSTEMS
 Serial number: 342319012F

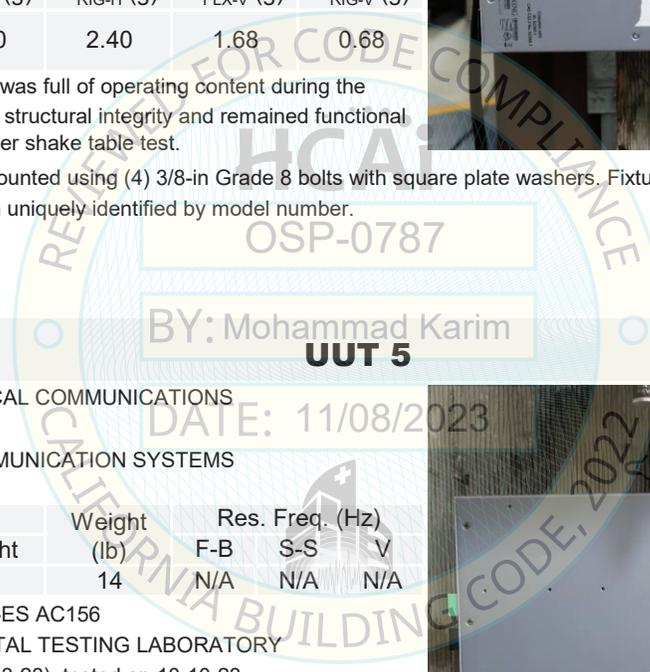
Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
3.3	17.3	8.5	14	N/A	N/A	N/A

Code & criteria: 2022 CBC, ICC-ES AC156
 Test laboratory: ENVIRONMENTAL TESTING LABORATORY
 Report: 23082TR1.0 (dated 10-13-23), tested on 10-10-23

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1	3.20	2.40	1.68	0.68
2.50	0				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid wall mounted using (4) 3/8-in Grade 8 bolts with square plate washers. Fixture is rigid mounted to table.
 Construction: Construction uniquely identified by model number.
 Subcomponents: None.
 Testing notes: None.



UUT 6

Manufacturer: CORNING OPTICAL COMMUNICATIONS
 Model number: PSU6-1U
 Unit function: WIRELESS COMMUNICATION SYSTEMS
 Serial number: 062024A1A2



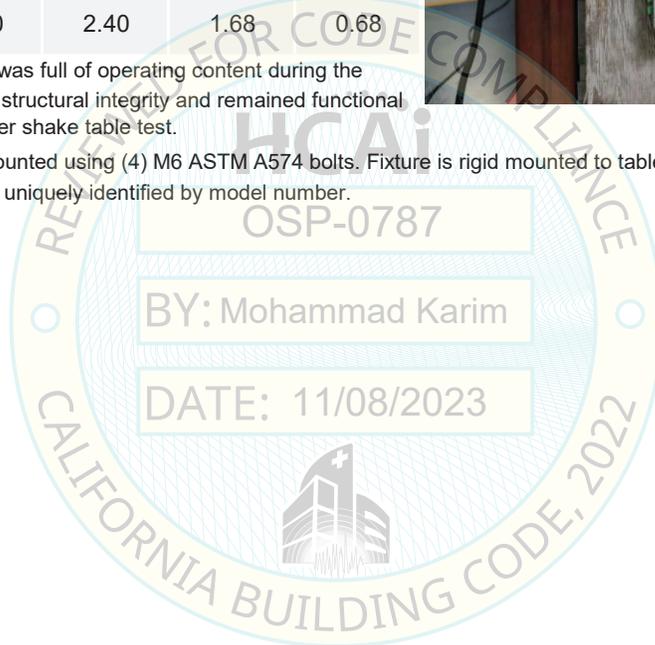
Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
1.7	13.7	17.5	11	N/A	N/A	N/A

Code & criteria: 2022 CBC, ICC-ES AC156
 Test laboratory: ENVIRONMENTAL TESTING LABORATORY
 Report: 23082TR1.0 (dated 10-13-23), tested on 10-10-23

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1	3.20	2.40	1.68	0.68
2.50	0				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid wall mounted using (4) M6 ASTM A574 bolts. Fixture is rigid mounted to table.
 Construction: Construction uniquely identified by model number.
 Subcomponents: None.
 Testing notes: None.



UUT 7

Manufacturer: CORNING OPTICAL COMMUNICATIONS
 Model number: Chatsworth Oberon 1074-N3RU
 Unit function: WIRELESS COMMUNICATION SYSTEMS
 Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
23.8	23.8	4.5	40	N/A	N/A	N/A

Code & criteria: 2022 CBC, ICC-ES AC156
 Test laboratory: ENVIRONMENTAL TESTING LABORATORY
 Report: 23082TR1.0 (dated 10-13-23), tested on 10-10-23

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1	3.20	2.40	1.68	0.68
2.50	0				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Ceiling suspended with (4) vertical 12GA wires and (4) diagonal 12GA wires at approximately 45-degree angles from X/Y/Z. Fixture is rigid mounted to table.

Construction: Carbon steel enclosure.

Subcomponents: Corning Optical Communications - N3RU Remote (E62-N3-2-17192537-I).

Testing notes: None.



UUT 8

Manufacturer: CORNING OPTICAL COMMUNICATIONS
 Model number: Chatsworth Oberon 1074-N3RU
 Unit function: WIRELESS COMMUNICATION SYSTEMS
 Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
23.8	23.8	4.5	40	N/A	N/A	N/A

Code & criteria: 2022 CBC, ICC-ES AC156
 Test laboratory: ENVIRONMENTAL TESTING LABORATORY
 Report: 23082TR1.0 (dated 10-13-23), tested on 10-10-23

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1	3.20	2.40	1.68	0.68
2.50	0				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Ceiling suspended with (4) vertical 12GA wires and (4) diagonal 12GA wires at approximately 45-degree angles from X/Y/Z. Fixture is rigid mounted to table.

Construction: Carbon steel enclosure.

Subcomponents: Corning Optical Communications - N3RU Remote (E62-N3-LM2535-2-37-I).

Testing notes: None.

