

KLOVEN

PATIENT ROOM LUMINAIRE
RECESSED, MULTI-FUNCTION LINEAR PAIR

FEATURES

- Multi-function luminaire with options for reading, ambient, exam and high exam for the patient environment.
- Sold as Tandem Master/Satellite pairs 4" aperture, 48" in length, and 4" depth
- Narrow, sleek, 4" aperture creates a clean appealing ceiling
- Linear luminaires mount parallel to and offset from patient bed for low glare, symmetric and asymmetric distribution
- Optional integral low voltage controller allows patient control from bedside or through nurse call system
- High efficiency acrylic lens features linear prisms for high performance without pixelation
- Designed for various mounting options, dry wall and dry wall with plaster trim for trimless finish or grid ceiling types (see detail drawings for finish dimensions)



CONTROLS TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Housing – 20 gauge die form and welded steel
- End caps –20 gauge die formed steel
- Housing and internal reflector have antimicrobial paint finish that inhibits the growth of microbes
- Seismic clips come standard for grid ceiling options to secure luminaire to T bar

OPTICAL PERFORMANCE

- Even, asymmetric light distribution from offset recessed tandem paired luminaires
- Nominal .080 acrylic lens incorporating design prisms for precision focus onto patient bed
- Lens incorporates a V groove construction for positive engagement on the housing and a secure snap-in design for tool less access.
- Led light source available in 3000K, 3500K, 4000K, 5000K CCT with 80 CRI and 90 CRI options
- Optimal led life > L80/84000 for Ambient section, L80/60,000 Examination section, L80/61,000 for Reading section

INSTALLATION

- KLOVEN is available Grid (Nema G), Narrow Grid (NG), Screw Slot (SS), Dry Wall (DW) and Dry Wall with plaster trim for trimless finish (PT)

ELECTRICAL

- 2 circuits are standard when Ambient and Exam functions are ordered
- 3 circuits are standard when Ambient, Exam and Reading functions are ordered
- Available in universal 120-277V 50/60 Hz and 347V (specification of dedicated voltage may be required for certain options)
- Drivers are suitable of 0-10V dimming down to 1% and dim to off (Dimming performance will vary when low voltage controller options are selected)
- The ambient and reading light functions can be controlled with integral low voltage controller (LVC) options. The LVC allows control with patient pillow switch (by others) or wired through the nurse call system (by others). See LVC ordering guide on last page
- The Exam function is typically controlled through a wall switch (by others)

CERTIFICATIONS

- UL1598 and CSA listed Damp Location (-20C to 25C)
- UL924
- CCEA approved (City of Chicago Environmental Act)
- Electromagnetic/Radio/Communication Interference
- FCC Part 15b (FCC communications interference)
- IEC/EN 60601-1-2

WARRANTY

- 5 year warranty

KEY DATA (Ambient+Exam*)	
Lumen Range	15,812–17,729
Wattage Range	113.1–126.4
Efficacy Range (LPW)	139.8–140.3
Rated Life (Hours)	Ambient: L80/84,000 Exam: L80/60,000 Reading: L80/61,000

*Based on 4000K, 80 CRI

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ORDERING GUIDE

Example: KLO-NG-D-30K8-D200R-D01-UNV-GLR-EF-LVCDSM3

CATALOG # _____

KLO					
Series	Ceiling Type	Distribution	Color Temperature ^{1,5}	Output	Driver
KLO Kloven Patient Room Tandem Fixture	G 15/16" Grid NG 9/16" Narrow Face Grid Ceiling SS 9/16" Screw Slot Grid Ceiling DW Drywall Ceiling PT Drywall Plaster Trim	D Direct	30K8 3000K 80CRI 35K8 3500K 80CRI 40K8 4000K 80CRI 50K8 5000K 80CRI 30K9 3000K 90CRI 35K9 3500K 90CRI 40K9 4000K 90CRI 50K9 5000K 90CRI 2750T SpectraSync 2700K-5000K ²	D200 2,000 lm Ambient, 6,000 lm Exam per side D300 3,000 lm Ambient, 6,000 lm Exam per side D200R 2,000 lm Ambient, 6,000 lm Exam, 1,000 lm Reading per side D300R 3,000 lm Ambient, 6,000 lm Exam, 1,000 lm Reading per side	D00 0-10V Dim to Off ³ D01 0-10V 1% Dim

Voltage	Options	Control Options	Low Voltage Control Options ^{4,6}
UNV Universal Voltage (120-277V) 120 120V 277 277V 347 347V	GLR Fast Blow Fuse EF 10W Battery Pack ⁶ EFST 10W Battery Pack Self Test ⁶ DTS Automatic Load Control Relay ⁶ CCEA Chicago Plenum	NX Networked – Wired NXE NX Wired Dual RJ45 SmartPORTS, without Sensor ⁶ NX Networked – Wireless NXWSM NX Networked Wireless Enabled Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ⁶ Lutron LVR Lutron Vive Integral Fixture Control (RF only)	LVC1 Dedicated On/Off Control for Reading Mode (Exam not connected to LVC) LVC12 Dedicated On/Off Control for Ambient Mode (Exam not connected to LVC) LVC21 Dedicated On/Off Control for Reading Mode and Ambient Mode or Sequential Cycling (Exam not connected to LVC) LVCDSM1 Smooth Dimming for Ambient Mode, On/Off for Reading Mode LVCDSM2 Smooth Dimming for Reading Mode, Ambient Mode is On/Off LVCDSM3 Smooth Dimming for Reading Mode and Ambient Mode LVCDSM4 Smooth Dimming for Reading Mode. Ambient Mode is not connected to LVC. LVCDSM5 Smooth Dimming for Ambient Mode, Reading Mode is not connected to LVC.

Notes:

- 1 All functions provided with same CCT / CRI, for other configurations consult factory.
- 2 Ambient only is controlled, reading and exam will default to static 3500K.
- 3 Not available with NX.
- 4 See LVC ordering guide on last page.
- 5 Ambient and Exam functions only are provided when specifying SpectraSync. If Reading Function is required consult factory.
- 6 Not available for 347V.

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CONTROLS

SpectraSync™ Color Tuning Technology:

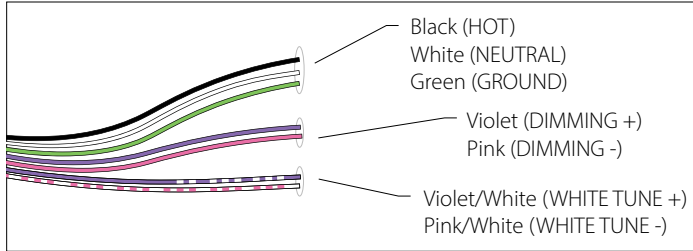
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K-5000K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space. For ambient mode only.

SpectraSync Tunable White

Available in: 2750T (2700K–5000K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

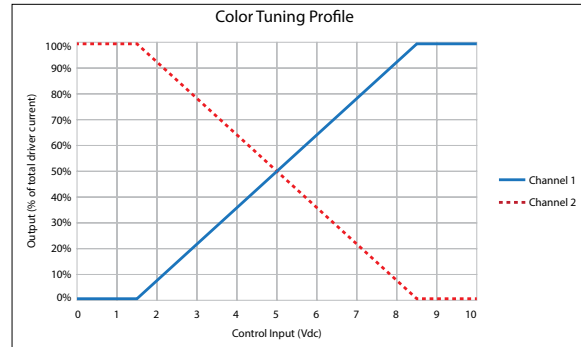


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and pink/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- NX Lighting Controls Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



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PERFORMANCE DATA TABLE

The table below shows the delivered lumens for the various lumen outputs. Values shown are total for the pair. Use this chart in connection with the output multiplier capability to deliver any output required.

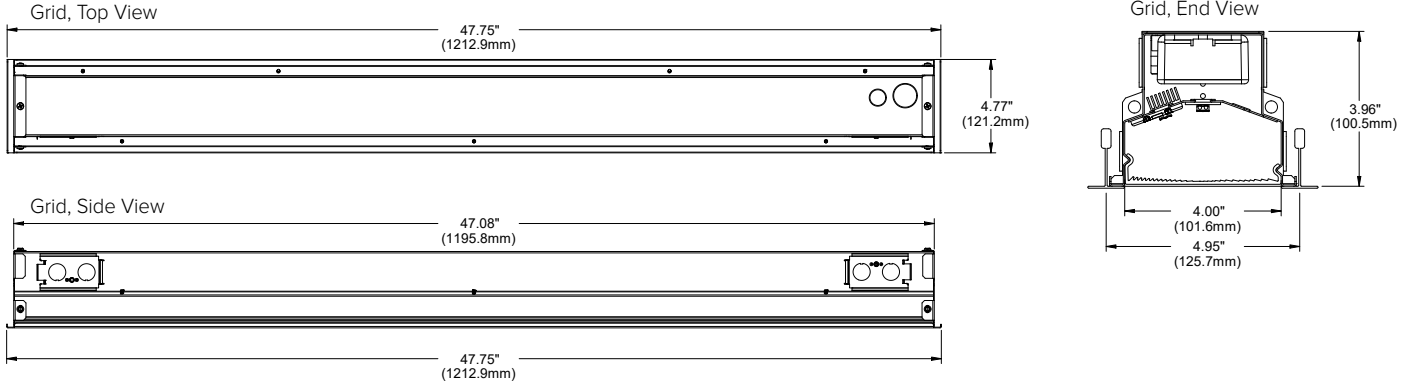
CRI	Model	CCT	Ambient Mode			Reading Mode			Ambient & Reading Mode			Examination Mode			Examination & Ambient Mode		
			Lumens	Input Watts	LPW	Lumens	Input Watts	LPW	Lumens	Input Watts	LPW	Lumens	Input Watts	LPW	Lumens	Input Watts	LPW
80 CRI	KLO-D200	3000K	4032	29.2	138.1	N/A	N/A	N/A	N/A	N/A	N/A	10997	83.5	131.7	15029	112.7	133.4
		3500K	4198	29.3	143.3	N/A	N/A	N/A	N/A	N/A	N/A	11299	83.7	135.0	15497	113.0	137.1
		4000K	4131	29.4	140.5	N/A	N/A	N/A	N/A	N/A	N/A	11681	83.7	139.6	15812	113.1	139.8
		5000K	4257	29.2	145.8	N/A	N/A	N/A	N/A	N/A	N/A	11601	83.4	139.1	15858	112.6	140.8
80 CRI	KLO-D300	3000K	5707	42.8	133.3	N/A	N/A	N/A	N/A	N/A	N/A	10997	83.5	131.7	16704	126.3	132.3
		3500K	5955	42.7	139.5	N/A	N/A	N/A	N/A	N/A	N/A	11299	83.7	135.0	17254	126.4	136.5
		4000K	6048	42.7	141.6	N/A	N/A	N/A	N/A	N/A	N/A	11681	83.7	139.6	17729	126.4	140.3
		5000K	6056	42.7	141.8	N/A	N/A	N/A	N/A	N/A	N/A	11601	83.4	139.1	17657	126.1	140.0
80 CRI	KLO-D200R	3000K	4032	29.2	138.1	1990	19.4	102.6	6022	48.6	123.9	10997	83.5	131.7	15029	112.7	133.4
		3500K	4198	29.3	143.3	2079	19.4	107.2	6277	48.7	128.9	11299	83.7	135.0	15497	113.0	137.1
		4000K	4131	29.4	140.5	1936	19.4	99.8	6067	48.8	124.3	11681	83.7	139.6	15812	113.1	139.8
		5000K	4257	29.2	145.8	2063	19.4	106.3	6320	48.6	130.0	11601	83.4	139.1	15858	112.6	140.8
80 CRI	KLO-D300R	3000K	5707	42.8	133.3	1990	19.4	102.6	7697	62.2	123.7	10997	83.5	131.7	16704	126.3	132.3
		3500K	5955	42.7	139.5	2079	19.4	107.2	8034	62.1	129.4	11299	83.7	135.0	17254	126.4	136.5
		4000K	6048	42.7	141.6	1936	19.4	99.8	7984	62.1	128.6	11681	83.7	139.6	17729	126.4	140.3
		5000K	6056	42.7	141.8	2063	19.4	106.3	8119	62.1	130.7	11601	83.4	139.1	17657	126.1	140.0
90 CRI	KLO-D200	3000K	3443	29.2	117.9	N/A	N/A	N/A	N/A	N/A	N/A	9347	83.5	111.9	12791	112.7	113.5
		3500K	3500	29.3	119.5	N/A	N/A	N/A	N/A	N/A	N/A	9612	83.1	115.7	13112	112.4	116.7
		4000K	3656	29.4	124.4	N/A	N/A	N/A	N/A	N/A	N/A	10338	83.7	123.5	13994	113.1	123.7
		5000K	3750	29.2	128.4	N/A	N/A	N/A	N/A	N/A	N/A	10220	83.4	122.5	13971	112.6	124.1
90 CRI	KLO-D300	3000K	4874	42.8	113.9	N/A	N/A	N/A	N/A	N/A	N/A	9347	83.5	111.9	12709	112.7	112.8
		3500K	4965	42.7	116.3	N/A	N/A	N/A	N/A	N/A	N/A	9612	83.1	115.7	13112	112.4	116.7
		4000K	5352	42.7	125.4	N/A	N/A	N/A	N/A	N/A	N/A	10338	83.7	118.6	13373	113.1	118.2
		5000K	5335	42.7	124.9	N/A	N/A	N/A	N/A	N/A	N/A	10220	83.4	118.2	13410	112.6	119.1
90 CRI	KLO-D200R	3000K	3443	29.2	117.9	1672	19.4	86.2	5115	48.6	105.2	9347	83.5	111.9	12791	112.7	113.5
		3500K	3500	29.3	119.5	1621	19.4	83.6	5121	48.7	105.2	9612	83.1	115.7	13112	112.4	116.7
		4000K	3656	29.4	124.4	1607	19.4	82.8	5263	48.8	107.8	10338	83.7	118.6	13994	113.1	123.7
		5000K	3750	29.2	128.4	1692	19.4	87.2	5442	48.6	112.0	10220	83.4	118.2	13971	112.6	124.1
90 CRI	KLO-D300R	3000K	4874	42.8	113.9	1672	19.4	86.2	6545	62.2	105.2	9347	83.5	111.9	14221	126.3	112.6
		3500K	4965	42.7	116.3	1621	19.4	83.6	6586	62.1	106.1	9612	83.1	115.7	14577	125.8	115.9
		4000K	5352	42.7	125.4	1607	19.4	82.8	6959	62.1	112.1	10338	83.7	118.6	15690	126.4	124.1
		5335	42.7	124.9	1692	19.4	87.2	7027	62.1	113.2	10220	83.4	118.2	15556	126.1	123.4	

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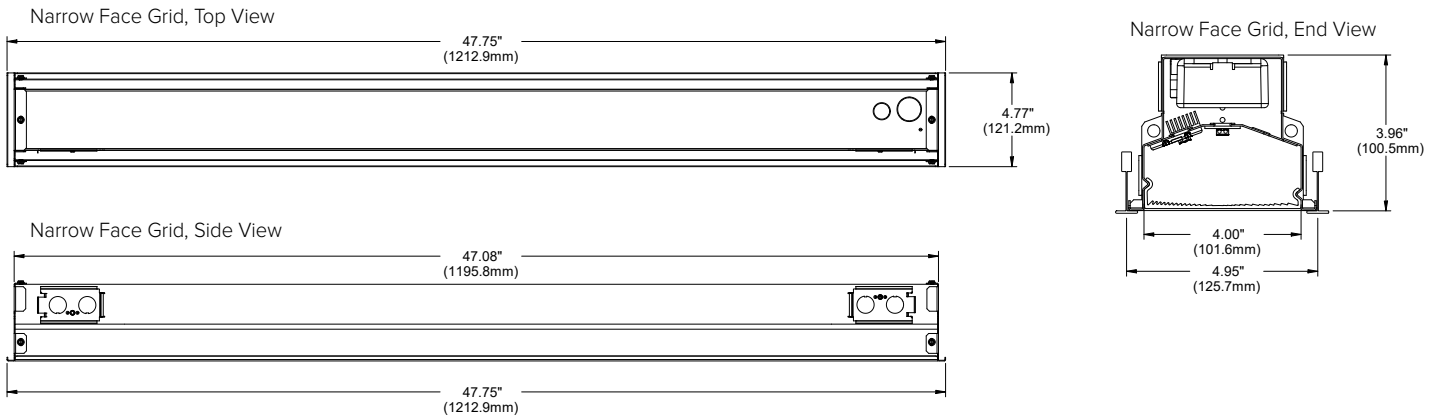
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DIMENSIONS

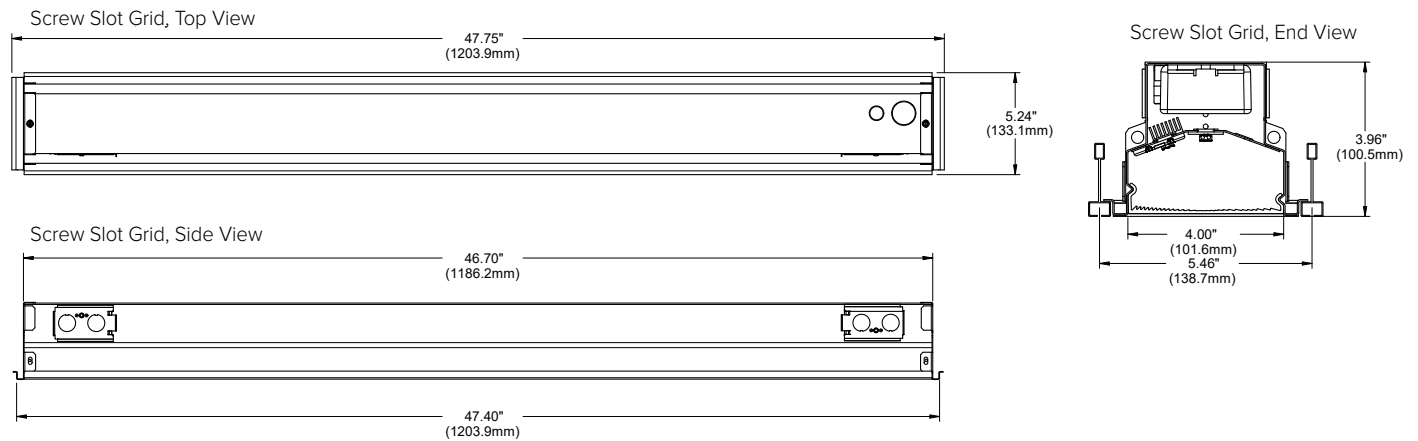
GRID



NARROW FACE GRID



SCREW SLOT GRID

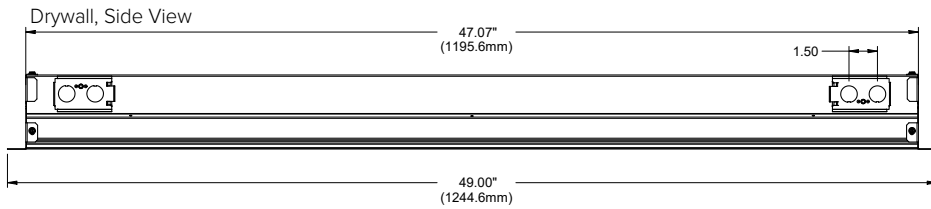
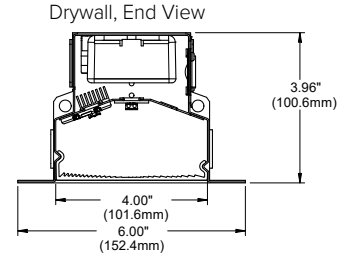
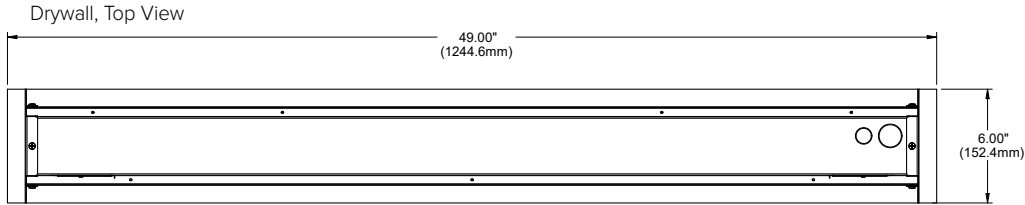


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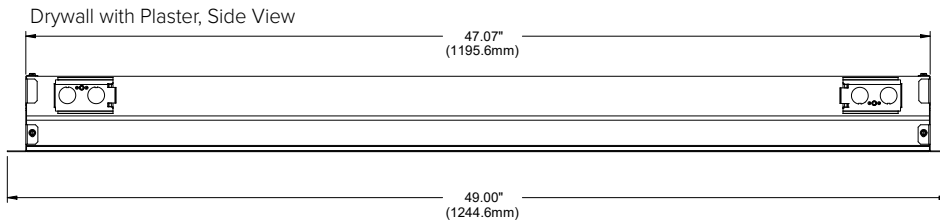
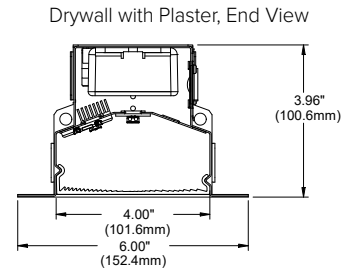
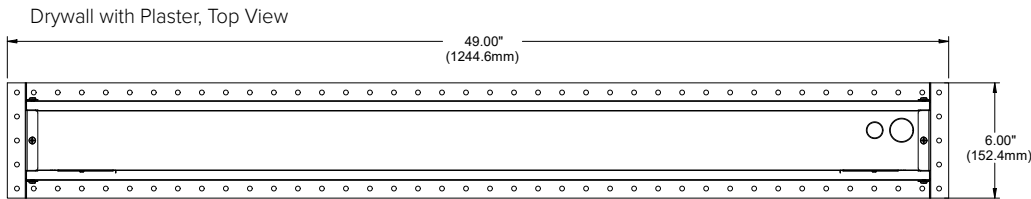
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DIMENSIONS

DRYWALL



DRYWALL WITH PLASTER



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KLOVEN LVC ORDERING GUIDE

LVC ORDERING CODE	AMBIENT FUNCTION	READING FUNCTION	EXAM FUNCTION
			Typically controlled by switch not connected to LVC
LVC1	Not Connected	I	
LVC12	I	Not Connected	
LVC21	I OR S		
LVCDSM1	SM	I	
LVCDSM2	I	SM	
LVCDSM3	SM	SM	
LVCDSM4	Not Connected	SM	
LVCDSM5	SM	Not Connected	

Notes:

- LVC1 Low voltage controller for individual control of the reading function
 - LVC12 Low voltage controller for individual control of the ambient function
 - LVC21 Low voltage controller for individual or sequential control of 2 independent functions
 - LVCDSM Low voltage controller for up to 3 functions with 1 or 2 functions having 0-10 dimming and the remaining function(s) being controlled independently
- *LVC not available with 347V, NX or DTS options. Consult factory for compatibility with other controls systems.

LVC SELECTION CHART

The Low voltage controller (LVC) option allows control of the luminaire function from a patient pillow switch, bed side rail or wall switch with normally-open dry contacts		
INDEPENDENT	I	Dedicated on/off control for a single lead
SEQUENTIAL	S	On / Off control of 2 loads sequentially by cycling through them
SMOOTH DIM	SM	Smooth increase in light level from a starting point from 25% by continuing to press the switch, when released, press again the light level decreases until the switch is released