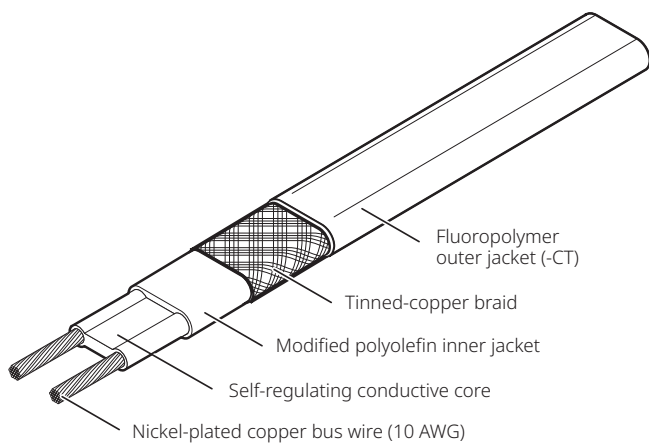


## Self-regulating heating cables Electrical freeze protection on long pipelines in nonhazardous and hazardous locations

### PRODUCT OVERVIEW



The Raychem LBTV self-regulating heating cables provide freeze protection and low-temperature maintenance for longline applications. The LBTV heating cables maintain process temperatures up to 150°F (65°C) and can withstand intermittent exposure to temperatures up to 185°F (85°C).

The cables are configured for use in nonhazardous and hazardous locations, including areas where corrosives may be present.

The LBTV heating cables provide long circuit length capability. They can be used for continuous circuit lengths up to 1,250 feet (381 m) powered from a single source. LBTV cables are especially well suited for tracing long pipelines containing temperature-sensitive fluids or where high reliability is required.

Raychem LBTV cables meet the requirements of the U.S. National Electrical Code and the Canadian Electrical Code. For additional information, contact your Chemelex representative or call (800) 545-6258.



### Heating cable construction

### APPLICATION

Area classification	Nonhazardous and hazardous locations
Traced surface type	Metal and plastics
Chemical resistance	Organic and aqueous inorganic chemicals and corrosives

### SUPPLY VOLTAGE

200–277 Vac

### SPECIFICATIONS

Maximum maintain or continuous exposure temperature (power on)	150°F (65°C)
Maximum intermittent exposure temperature, 1000 hours (power on or off)	185°F (85°C)
Minimum installation temperature	-76°F (-60°C)
Temperature classification	T6, 185°F (85°C) Temperature ID numbers are consistent with North America national electrical codes.
Bus wire size	10 AWG
Outer jacket color	Black
Minimum bending radius	-76°F (-60°C) ≤ T < -4°F (-20°C): 1.4" (35 mm) -4°F (-20°C) ≤ T < 14°F (-10°C): 1.2" (30 mm) 14°F (-10°C) ≤ T < 32°F (0°C): 1" (25 mm) 32°F (0°C) ≤ T < 50°F (+10°C): 0.8" (20 mm) T ≥ 50°F (+10°C): 0.5" (12.7 mm)

## APPROVALS

### Hazardous Locations



Class I, Div. 2, Groups A, B, C, D  
 Class II, Div. 2, Groups F, G  
 Class III  
 Tmin -40°C



Class I, Div. 1 and 2, Groups A, B, C, D  
 Class II, Div. 1 and 2, Groups E, F, G  
 Class III  
 -WS for Canada

### Zone Approvals



CL I, ZN1, AEx e II T6  
 Tmin -40°C



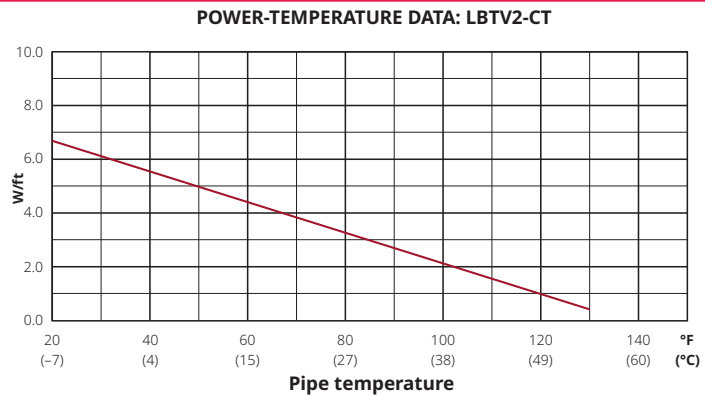
Ex 60079-30-1 IIC T6 Gb  
 Ex 60079-30-1 IIIC T6 Db  
 Class I Zone 1 AEx eb IIC T85°C Gb  
 Zone 21 AEx tb IIIC T85°C Db  
 -WS for Canada

## DESIGN AND INSTALLATION

For proper design and installation, use TraceCalc Pro design software or the Design section of the Industrial Heat Tracing Solutions Products & Services Catalogue (H56550). Literature is available on chemex.com

### NOMINAL POWER OUTPUT RATING ON METAL PIPES

	Adjustment factor power output
208 V	0.94
277 V	1.04



**Note:** To choose the correct heating cable for your application, use the Design section of the Industrial Heat Tracing Solutions Products & Services Catalogue (H56550). For more detailed information, use TraceCalc Pro design software.

### MAXIMUM CIRCUIT LENGTHS BASED ON CIRCUIT BREAKER SIZES

	Ambient temperature at start-up		Maximum circuit length (in feet) per circuit breaker			
			208 V			
			40 A	50 A	60 A	70 A
<b>LBTV2-CT</b>	40°F	(4°C)	1015	1175	1175	1175
	20°F	(-7°C)	610	1045	1175	1175
	0°F	(-18°C)	450	680	1060	1175
	-20°F	(-29°C)	360	510	740	1065
	-40°F	(-40°C)	305	415	565	785

	Ambient temperature at start-up		Maximum circuit length (in feet) per circuit breaker			
			240 V			
			40 A	50 A	60 A	70 A
<b>LBTV2-CT</b>	40°F	(4°C)	910	1250	1250	1250
	20°F	(-7°C)	570	945	1250	1250
	0°F	(-18°C)	425	625	975	1250
	-20°F	(-29°C)	340	480	675	1000
	-40°F	(-40°C)	290	390	525	720

	Ambient temperature at start-up		Maximum circuit length (in feet) per circuit breaker			
			277 V			
			40 A	50 A	60 A	70 A
<b>LBTV2-CT</b>	40°F	(4°C)	845	1250	1250	1250
	20°F	(-7°C)	525	880	1250	1250
	0°F	(-18°C)	395	580	905	1250
	-20°F	(-29°C)	315	445	630	925
	-40°F	(-40°C)	270	365	490	665

**PRODUCT DIMENSIONS AND WEIGHT**

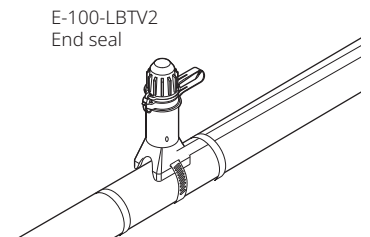
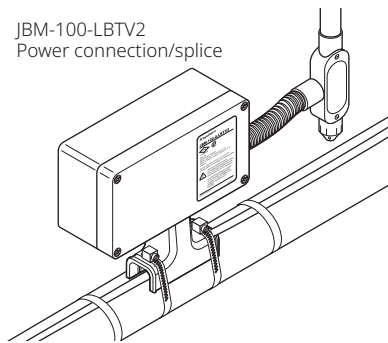
	<b>LBTV2-CT</b>
Weight	170 lbs/1000 ft (250 g/m)
Width x Thickness (nominal)	0.665 x 0.303 in (16.9 x 7.7 mm)

**ORDERING DETAILS**

<b>Description</b>	<b>Part number</b>
LBTV2-CT	486428-000

**CONNECTION KITS**

These connection kits must be used to ensure proper functioning of the product and compliance with warranty, code, and approvals requirements.



**GROUND-FAULT PROTECTION**

To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of Chemelex, agency certifications, and national electrical codes, ground-fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection. Many Raychem control and monitoring systems meet the ground-fault protection requirement.

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**Raychem Tracer Pyrotenax Nuheat**