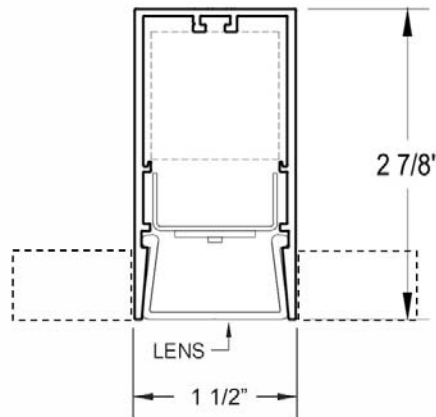




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LED Lamping



Click photo to view product page
 Page 1: Overview & Nomenclature
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 Pages 4-5: Photometric Info / Downloads
 Page 6: Mounting Details
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Revision Date: May 18, 2022
 Gammalux Lighting Systems reserves the right to change details of fixture designs and construction at any time.

Product Overview (for complete specifications, see pages 2 & 3)

Upgrade Capability: LED components may be easily upgraded in the field to increase energy efficiency.

Construction: I.C. rated. ARRA, RoHS, REACH and Prop 65 compliant. Extruded aluminum housing for superior fit and finish. Runs and complex patterns are ordered, built and shipped with a single item # and can be built to match field conditions.

Unbroken Illumination: Continuous illumination in custom-length runs and patterns with illuminated corners.

Electrical: LED components by major manufacturers. Fixtures can be fitted with control interface devices and specialty LED components (consult factory). Standard Output, High Output and Custom Output options available.

Optical: Lenses available in medium or heavy diffusion.

Standard Nomenclature

<p>Manufacturer Gammalux</p> <p>Cross Section (nom) 1" x 3"</p> <p>Housing RC Recessed</p> <p>Model 2nd Gen</p> <p>Series Beam</p>	<p>Output S Standard Output H High Output C Custom Output (see addendum page)</p> <p>Color Temp. (nom) 27 2700K 30 3000K 30 3000K 35 3500K 40 4000K RGB & RGBW, consult factory</p> <p>Lamp LED</p> <p>Voltage 120V, 277V, UNIV</p> <p>LED Arrays in X-Sec 1</p>	<p>Driver ZTV10 0-10V Dim to 10% For all options, see next page</p> <p>Length Option S Specific N Nominal (Nominal is recommended for grid mount)</p> <p>Run or Pattern Specify total run length (i.e. 43' 5 1/8") For illuminated patterns, follow overall length or dimensions with L, T, X, U, RECT or SQ (i.e. 43' 5 1/8" RECT or 10' X 10' SQ). If overall length or dims are unknown, use TBD and follow with L, T, X, U, RECT or SQ (i.e. TBD RECT or TBD SQ). Consult factory for complex or multi-plane patterns.</p>	<p>Ceiling Interface GFR Gyp w/ .5" cover flange GMR Gyp w/ mud flange NFR No flange or interface T1W 15/16" flat grid w/ flat tiles T1TW 15/16" flat grid w/ tegular tiles T9W 9/16" flat grid w/ flat tiles T9TW 9/16" flat grid w/ tegular tiles TSW 9/16" slot grid Consult factory for all others.</p> <p>Mounting REC Recessed in ceiling. Consult factory for in-wall.</p>	<p>Paint Colors W White (See color chart for other colors) CCM Custom Color Match</p> <p>Paint Finish H High Gloss SG Semi-Gloss</p> <p>Options BPE Battery Pack (4' section) DL UL Damp Label EMERG Emergency Ckt 2CKT Dual Circuiting SBO Sensor By Others#</p> <p>Shielding ASLMD Acrylic Satin Lens, Medium Diffuse ASLHD Acrylic Satin Lens, Heavy Diffuse</p>
<p>GB13RC2 - 1SL358 - UNIV - ZTV10 - 4'N - REC/XXXX - ASLMD - WSG</p>				

** 90+ CRI option increases wattage by nom. 14.5%. # Sensor By Others, factory installed (consult factory).

Specifications (continued on next page)

Electrical

Output: Standard (S) and high (H) options deliver a pre-set lumen package (see chart below). Custom-programmed output (C) is specified as LPF, WPF or % of High Output (see Custom Programmed Output page).

Static Driver: eldoLED **Optotronic*** programmable driver, wired for static operation (DVR).

0-10V Dimming: eldoLED **Optotronic*** programmable driver, wired for 0-10v control and dimming to 10% (ZTV10) or to 1% (ZTV1). For 0-10v dimming to 1% in lengths other than 1' increments, consult factory.

Step Dimming: Generic step dimming driver, two hot inputs for 100% and 50% output (SD2).

DALI Dimming: Generic DALI driver with two loose control wires exiting fixture at power feed location (DALI).

Lutron Dimming: **Hi-lume LTE** dim to 1% 2-wire 120V forward phase (LTEA2WA for PWM providing smoothest dimming or LTEA2WC for CCR in applications with EMI requirements). **Hi-Lume** dim to 1% EcoSystem with Soft-On, Fade-to-Black (LDE1).

White Emitter: Nichia 757G emitters* binned within 3 MacAdam ellipses in Osram or Gammalux proprietary array. 90+ CRI option with extended lead time (CRI code 9) results in nominal 14.5% drop in efficacy; increase calculated wattage by 14.5%.

Battery Pack: Bodine **BSL310LP*** (BPE). 4W max input, 10W initial output, delivers min. 27% of High Output value per 4' length.

LED System: 70% lumen output (L70) at max 85 degrees C calculated at >60k hours. Fixtures are shipped with anti-static gloves to minimize the risk of damage to LEDs during installation. [5 year limited warranty](#).

Upgrade Capability: LED assemblies can be replaced in the future with the latest factory-provided and fully warranted components. On-board sensors, control interface devices and alternate LED components may be specified (consult factory). Fixtures bear UL & cUL Dry Location label. Damp Location label available (DL).

*Subject to availability; may be substituted by Gammalux. Components and specifications may be changed without notice.

LUMENS AND WATTS BY OUTPUT OPTION AND LED COLOR @ 80+ CRI*											
STANDARD OUTPUT LED						HIGH OUTPUT LED					
MEDIUM DIFFUSE LENS (ASLMD)		DELIVERS: 538.5 LPF				MEDIUM DIFFUSE LENS (ASLMD)		DELIVERS: 718 LPF			
HEAVY DIFFUSE LENS (ASLHD)		DELIVERS: 409.3 LPF				HEAVY DIFFUSE LENS (ASLHD)		DELIVERS: 545.7 LPF			
CCT	2700 K	3000 K	3500 K*	4000 K	5000 K	CCT	2700 K	3000 K	3500 K*	4000 K	5000 K
WATTS / FT.	5.9	5.7	5.6	5.3	5.2	WATTS / FT.	8.1	7.8	7.6	7.3	7.1
<small>* IES FILES WERE CREATED USING 3500 K DIODES @ 80+ CRI. WATTAGE IS MULTIPLIED BY 1.06 FOR 2700 K, 1.02 FOR 3000 K, .98 FOR 4000 K AND .93 FOR 5000 K DIODES TO MAINTAIN THE SAME DELIVERED LUMENS THROUGHOUT ALL COLOR TEMPERATURES. FOR 90+ CRI, INCREASE WATTAGE BY 14.5%. SEE ADDENDUM FOR CUSTOM PROGRAMMING.</small>											

Construction

Housing: I.C. rated. ARRA, RoHS, REACH and Prop 65 compliant. Extruded aluminum body 1.50" wide x 2.91" high, 6063T5, 0.070" min thickness. Each housing is 12' max unless longer housings are pre-coordinated with the factory to reduce joints and installation labor. Fixtures are built per approved factory drawings and tested as a complete system at the factory. Continuous runs and patterns are ordered, built and shipped with a single item #. Fixtures ordered as individuals are not designed to be joined together in the field.

Joiner System: Automatic alignment, no loose parts, one tool to tighten factory installed bolts for hairline seam. No light leaks.

Lamping: Patterns are fully illuminated. Runs ordered in Specific Length (Length Option S) will be built to the exact dimension shown on signature-approved shop drawings. Runs ordered in Nominal Length (Option N) may be factory-adjusted to accommodate standard mounting positions or grid centers. Factory drawings will show all dimensions for approval prior to production. Fixtures built to less than 4' may require master/satellite driver installation - consult factory.

Mounting: Recessed into a ceiling system (REC). Fixtures surrounded by grid should be ordered in Nominal length (Length Option N) and can be installed from below. Consult factory for in-wall installation.

Specifications (continued)

Optical

Acrylic Satin Lens, Medium Diffuse: Snap-in. Shall be 100% DR acrylic (**ASLMD**).

Acrylic Satin Lens, Heavy Diffuse: Snap-in. Shall be 100% DR acrylic (**ASLHD**)

See lens images on photometric pages.

Finish

Acid etched or clear anodized housing electrostatically sprayed with high solids aliphatic two component polyurethane high (**H**) or semi-gloss (**SG**) to an avg. thickness of 2 mils. Custom finish, consult factory.



Packing and Shipping

Fixtures built for continuous rows and patterns are given a specific location identifier, clearly identified on factory layout drawings, the fixture's ID Label, protective wrapping and on each end of fixture carton. Shipping pallets are built with 2" clearance, extending beyond the length and width of cartons, providing shipping protection.

Approx. weight of 4' module is 6 lbs. including carton. Weight of pallet and supplemental packing materials not factored in.

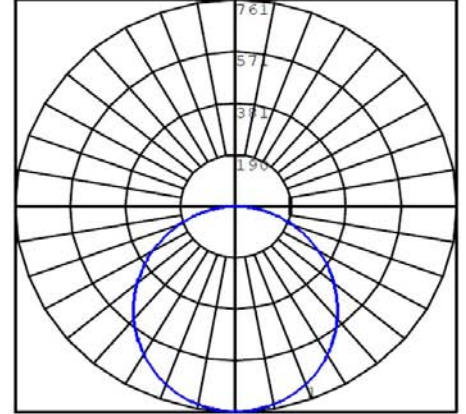
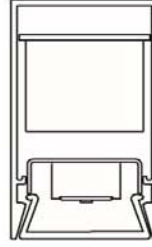
Photometric Reports for
STANDARD OUTPUT FIXTURES

FIXTURE USES LENS ASLMD (MEDIUM DIFFUSE) AND 3500K LEDs @ 80+ CRI

IESNA: LM-63-2002
ISSUEDATE: 8/14/2018
TEST: 12457994.01 MOD TO SO, 57452
TESTLAB: UL VERIFICATION SVCS, INC.
MANUFAC: GAMMALUX LTG SYS
LUMCAT: GB13D21SL358ASLMD
LAMPS: 144 WHITE LEDs



Acrylic Satin Lens,
Medium Diffuse
(ASLMD)



EFFICACY (TOTAL): 99.1 LPW
DISTRIBUTION % UP: 0%
DISTRIBUTION % DN: 100% (538.5 LPF)
CIE CLASSIFICATION: DIRECT

LUMINOUS OPENING: RECTANGULAR
WIDTH: 1.5 in.
LENGTH: 48.5 in.

INPUT WATTS: 21.74 per 4'

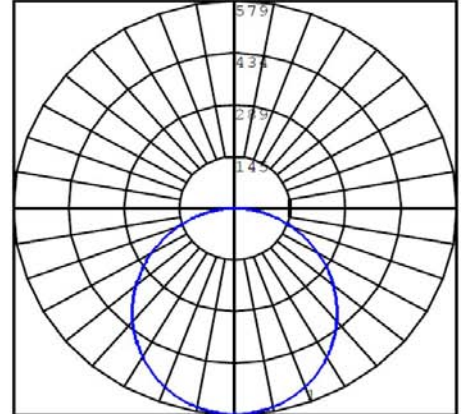
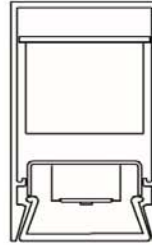


FIXTURE USES LENS ASLHD (HEAVY DIFFUSE) AND 3500K LEDs @ 80+ CRI

IESNA: LM-63-2002
ISSUEDATE: 8/14/2018
TEST: 12457994.01 MOD SO, ASLHD, 57452
TESTLAB: UL VERIFICATION SVCS, INC.
MANUFAC: GAMMALUX LTG SYS
LUMCAT: GB13D21SL358ASLHD
LAMPS: 144 WHITE LEDs



Acrylic Satin Lens,
Heavy Diffuse
(ASLHD)



EFFICACY (TOTAL): 75.3 LPW
DISTRIBUTION % UP: 0%
DISTRIBUTION % DN: 100% (409.3 LPF)
CIE CLASSIFICATION: DIRECT

LUMINOUS OPENING: RECTANGULAR
WIDTH: 1.5 in.
LENGTH: 48.5 in.

INPUT WATTS: 21.74 per 4'



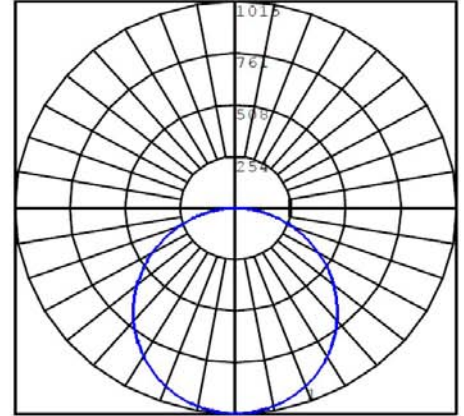
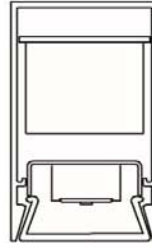
**Photometric Reports for
HIGH OUTPUT FIXTURES**

FIXTURE USES LENS ASLMD (MEDIUM DIFFUSE) AND 3500K LEDs @ 80+ CRI

IESNA: LM-63-2002
ISSUEDATE: 8/14/2018
TEST: 12457994.01 MOD 57452
TESTLAB: UL VERIFICATION SVCS, INC.
MANUFAC: GAMMALUX LTG SYS
LUMCAT: GB13D21HL358ASLMD
LAMPS: 144 WHITE LEDs



Acrylic Satin Lens,
Medium Diffuse
(ASLMD)



EFFICACY (TOTAL): 93.8 LPW
DISTRIBUTION % UP: 0%
DISTRIBUTION % DN: 100% (718 LPF)
CIE CLASSIFICATION: DIRECT

LUMINOUS OPENING: RECTANGULAR
WIDTH: 1.5 in.
LENGTH: 48.5 in.

INPUT WATTS: 30.59 per 4'

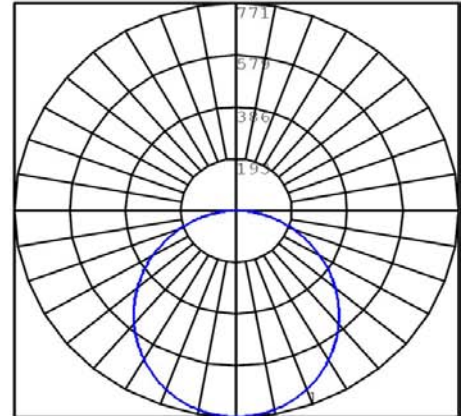
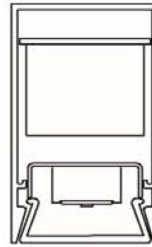


FIXTURE USES LENS ASLHD (HEAVY DIFFUSE) AND 3500K LEDs @ 80+ CRI

IESNA: LM-63-2002
ISSUEDATE: 8/14/2018
TEST: 12457994.01 MOD TO ASLHD, 57452
TESTLAB: UL VERIFICATION SVCS, INC.
MANUFAC: GAMMALUX LTG SYS
LUMCAT: GB13D21HL358ASLHD
LAMPS: 144 WHITE LEDs



Acrylic Satin Lens,
Heavy Diffuse
(ASLHD)



EFFICACY (TOTAL): 71.36 LPW
DISTRIBUTION % UP: 0%
DISTRIBUTION % DN: 100% (545.7 LPF)
CIE CLASSIFICATION: DIRECT

LUMINOUS OPENING: RECTANGULAR
WIDTH: 1.5 in.
LENGTH: 48.5 in.

INPUT WATTS: 30.59 per 4'



Mounting Details

Factory Drawings: Fully dimensioned factory drawings will be provided upon receipt of purchase order.

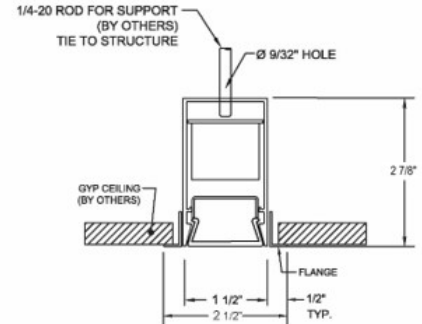
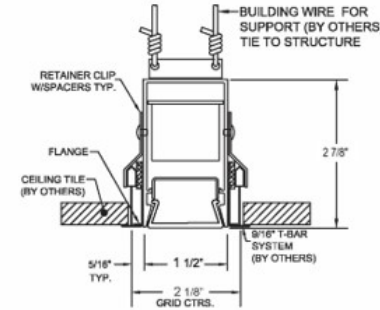
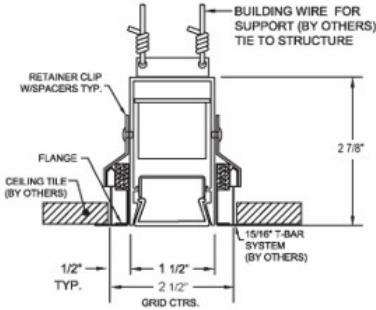
Grid Mount

Hard Ceiling Mount

15/16" Flat TBar:
Specify **T1W** code in catalog #

9/16" Flat TBar:
Specify **T9W** code in catalog #

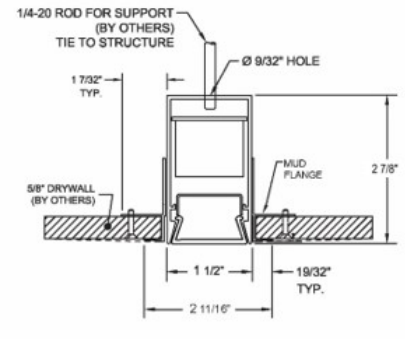
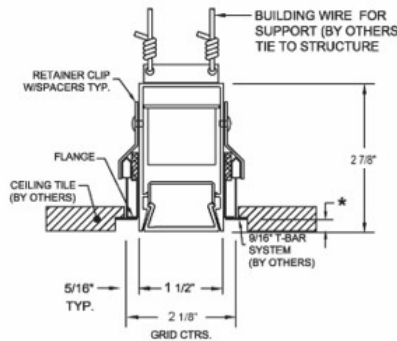
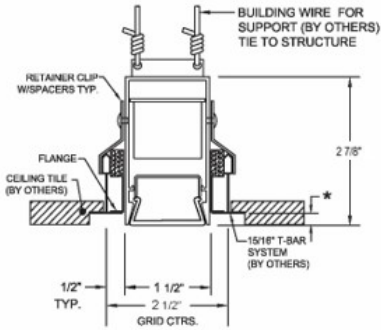
Gyp type ceiling with cover flange:
Specify **GFR** code in catalog #



15/16" Flat TBar with Tegular Tiles:
Specify **T1TW** code in catalog #

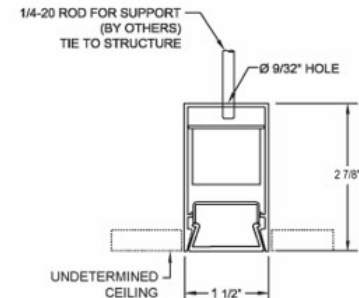
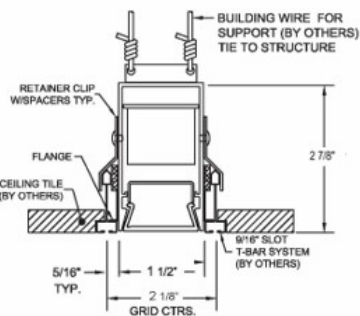
9/16" Flat TBar with Tegular Tiles:
Specify **T9TW** code in catalog #

Gyp type ceiling, Flangeless (mud flange):
Specify **GMR** code in catalog #



9/16" Slot Grid:
Specify **TSW** code in catalog #

Undetermined ceiling, Flangeless:
Specify **NFR** code in catalog #



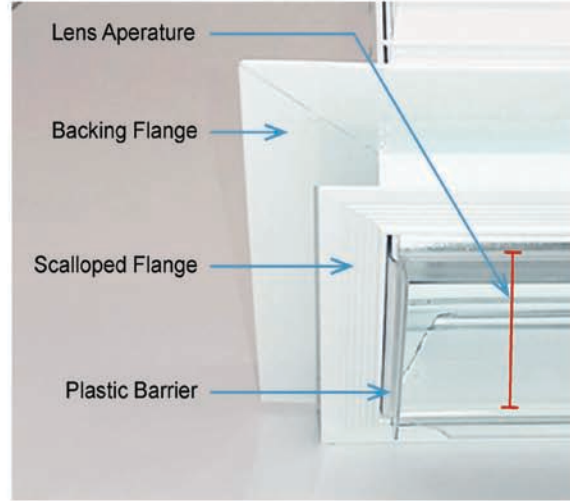
*Contractor must provide dimensions to Gammalux.

Gammalux Lighting Systems reserves the right to change the details of fixture design and construction at any time.

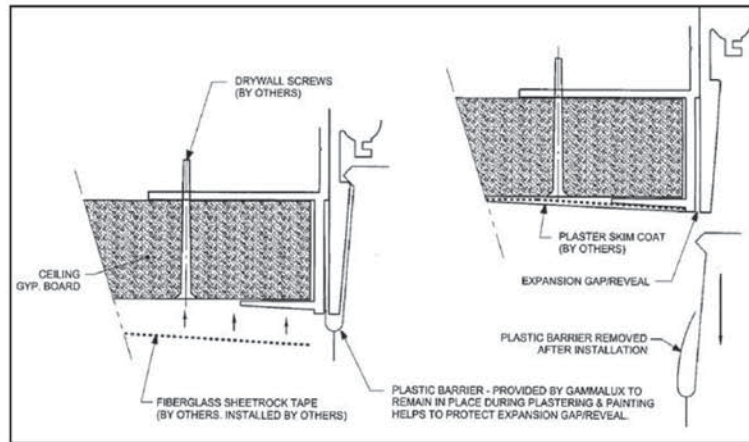
Mud Flange Detail



Fixture ships with steel spacer bracket to maintain aperture integrity during installation.



Mud flange assembly consists of a backing flange and scalloped flange. Plastic barriers protect the integral expansion gap from mud and paint.



Gyp material is embedded between the backing flange and scalloped flange, then drywall screws secure the drywall to the backing flange. Fiberglass tape, skim coat of plaster and paint are added on top of the scalloped flange with the plastic barrier installed throughout all procedures. After paint is dry, plastic barrier is removed, revealing clean expansion gap.



Sample Installations



Flush with 15/16" grid (T1W)



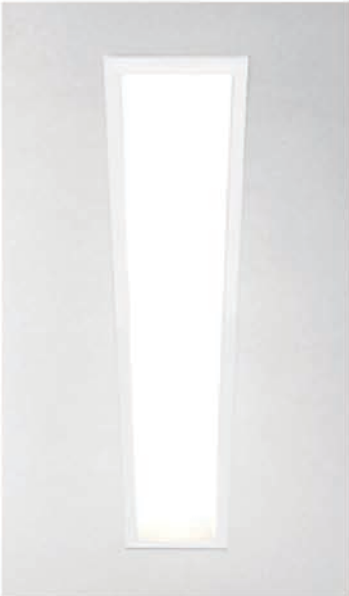
Modified per spec



Dropped with tegular tiles in 9/16" grid (T9TW)



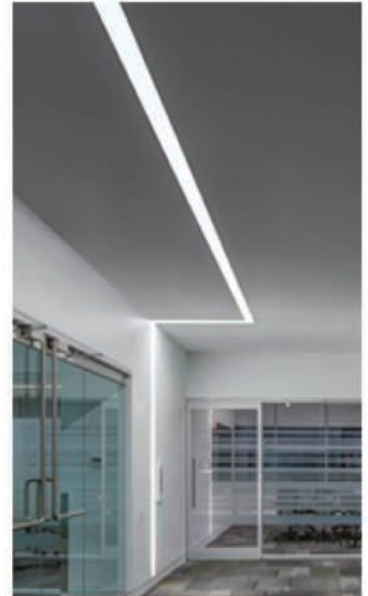
No flange (NFR)



Gyp flange (GFR)



Mud flange (GMR)



Mud flange (GMR)