

RAILING & DECKLITES®

INSTALLATION & MAINTENANCE GUIDE

DECKING RAILING

| LIGHTING | ACCESSOR<u>IES</u> www.timbertech.com

Dear Valued Customer:

TimberTech would like to thank you for your interest in our railing systems. We strive to better serve our customers and hope that you have a wonderful experience with TimberTech.



TimberTech focuses on quality, innovation and brand in all that we do. With an assortment of plank profiles, industry leading railing systems, fencing and numerous accessories, building beautiful decks has never been easier.

TimberTech is committed to providing builders and professional deck installers with exciting new products our customers demand, as well as programs and support material to differentiate themselves in the marketplace.

TimberTech is a member of the Crane Building Products family of companies, which is part of the Crane Group, a more than 60-year old family owned company.

TimberTech has compiled this Railing & DeckLites[®] Installation & Maintenance Guide to provide a thorough resource for technical information for our railing systems and deck lighting system.

To get information on other TimberTech products visit timbertech.com or ask your dealer for these installation guides:

- TimberTech Decking & DrySpace™ Installation & Maintenance Guide
- TimberTech FenceScape® Installation & Maintenance Guide

Installing TimberTech

TimberTech offers a variety of innovative railing systems and infill options. A variety of color choices allow you to match or complement your TimberTech deck planks.

TimberTech products are a revolutionary alternative to traditional wood-they don't rot, warp or splinter-and they look great year after year. And unlike wood, TimberTech products require no painting, staining or sealing.

Make sure your project meets local building codes before you begin installation.

These installation guidelines will direct you through the process of installing TimberTech railing systems. These methods are recommended by TimberTech but may not cover every installation scenario you encounter. Since each installation is unique in its performance requirements, the ultimate installation method used is the sole responsibility of the installer. TimberTech recommends that all designs be reviewed by a licensed architect, engineer or local building official before installation.

TimberTech Code Listings

Once a product is tested by an independent lab, an application and report is submitted to one of several agencies that provide listings for building products that meet the requirements of Acceptance Criteria 174 (AC 174) as set forth by the International Code Council Evaluation Service (ICC-ES). TimberTech currently has listings from the ICC-ES and Architectural Testing Inc. The following TimberTech reports on code compliance are available to download on www.timbertech.com.

For the most up-to-date code listings visit www.timbertech.com/installation.

ICC Evaluation Service, Inc.

ICC ESR-1400 ● Ornamental Rail System

Underwriters Laboratories, Inc. E351168 • DeckLites

ATI Architectural Testing, Inc.

CCRR-0114 • RadianceRail
CCRR-0129 • BuilderRail
Code listing for RadianceRail Express Pending

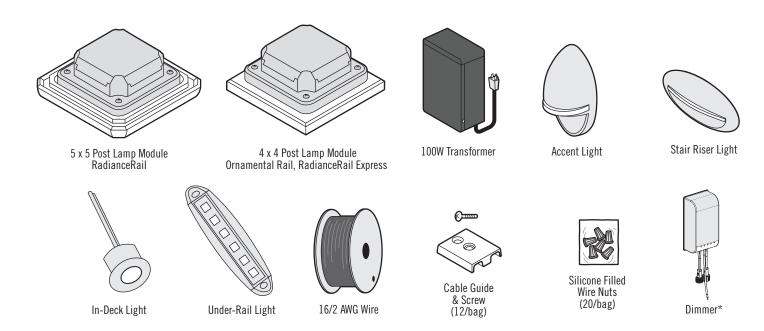
Test Reports:

ADA Hand $\bar{\text{Rail}}$ & Secure Mount Post System tested to requirements of ICC-ES-AC-174



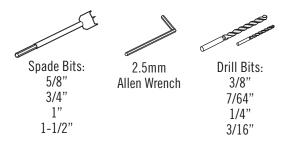


DeckLites Components



Tools Required

In addition to a basic tool set, you will need the following for installation of DeckLites components.



Important Safety Precautions

INSTRUCTIONS PERTAINING TO A RISK OF FIRE OR INJURY TO PERSONS IMPORTANT SAFETY INSTRUCTIONS

WARNING - To reduce the risk of FIRE OR INJURY TO PERSONS:

Turn off/unplug before servicing fixtures. Contact only switch/plug when turning on.

Keep lamp away from materials that may burn.

Do not operate the luminaire fitting with a missing or damaged cover.

SAVE THESE INSTRUCTIONS

For information about DeckLites®LED visit www.timbertech.com/DeckLites.

*For installation instructions for the dimmer, visit http://www.timbertech.com/installation/installation-resources

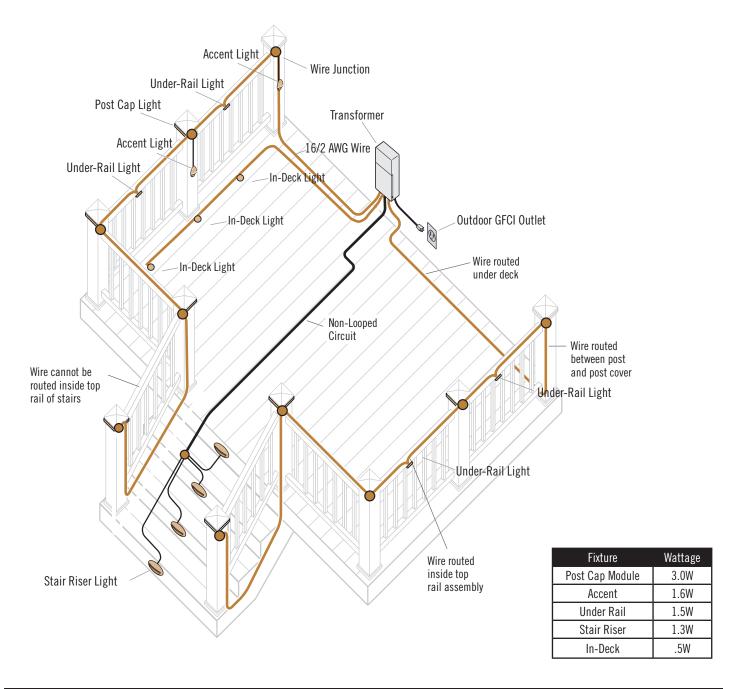


TimberTech DeckLites LED Layout Overview

The TimberTech DeckLites LED system is designed for use with the RadianceRail, RadianceRail Express and Ornamental Rail products.

Below is a sample lighting layout showing fixture placement and wiring routes. When laying out the wiring for your deck, keep the following in mind:

- Building codes vary by locale, please consult all applicable codes before beginning project.
- Modifications must be made to railing components during assembly to accommodate wiring and fixtures. Do not begin deck construction until you have read the lighting instructions.
- This unit secondary wiring shall be protected by routing in close proximity to the luminaire or fitting, or next to a building structure such as a house or deck. The wiring shall not be buried except for a maximum 6 inches (15.2cm) in order to connect to the main secondary wire.
- A maximum of 40W can be appliced to a single circuit. The maximum recommended load for the transformer is 90 watts. Please refer to chart below to determine that wattage of each fixture.
- The 16AWG secondary supply wire can be buried to a maximum of 6" for routing under deck or other obstacles. The Luminary (unit secondary) wires cannot be buried underground.
- Luminaries shall not be installed within 10 feet (1.52m) of a pool, spa or fountain
- Trim post covers to correct length see Post and Rail Prep page.





Wiring Instructions

Wire Connections

Connections between the main 16/2AWG cable and the lighting fixtures are made using the space between the post and the Post Cap or Post Light Module as a junction box.

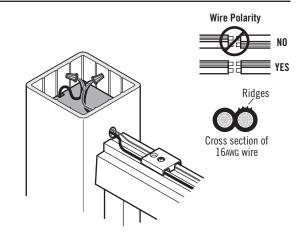
When routing the main wire around the deck, leave a loop of extra wire at the top of each post to allow for splicing connections.

Use silicone filled wire nuts with corrosion protection and intended for outdoor use to make all connections. They shall be copper, copper alloy, or the equivalent.



Be sure to **MAINTAIN POLARITY** by aligning ridges when splicing the main 16/2AWG wires or shorting will occur. Polarity for the 18AWG fixture wires is not critical.

When making splices, **do not pre-twist wires**. Pre-twisting wires can lead to a poor seal inside the wire nut causing corrosion and/or voltage drop.



Wire Nut Instructions

Use the following guidelines for correct usage of wire nuts.

IMPORTANT: Turn off power before installing or removing connector. Product to be used in accordance with local and national codes.

- 1. Strip wires 5/8"
- 2. Align frayed strands of conductors.
- Do not pre-twist. Place stripped wires together with ends even, but lead smaller stranded wires slightly ahead of larger solid or stranded wire.
- 4. Twist connector onto wires pushing firmly until hand-tight. DO NOT over torque.
- 5. Wipe excess sealant in and around conductors. DO NOT REUSE.

Transformer Connections

Consult the instructions provided with the transformer for additional information.

Power is supplied to the lighting fixtures via 16/2AWG wires connected to the provided transformer. One side of the 16/2AWG wire is connected to the Common terminal (C), the other side is connected to an Output terminal. One side of the 16/2AWG wire contains raised ridges to allow for easy identification (see Wire Connections section). The maximum recommended load for the transformers is 90 watts.

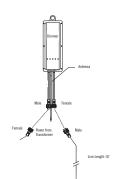
Outside GFCI Circuit

Dimmer Instructions

Install the Dimmer next to the DeckLites LED Transformer. Use the provided 10" wire and water-tight connector to connect the Dimmer to the DeckLites LED Transformer. Next, use the provided 10' wire and water-tight connector to connect the Dimmer to main run of wire.

To use the Dimmer, turn the DeckLites LED Transformer to a setting that turns the DeckLites on when desired. To dim the lights, press the button on the remote or on the dimmer until the desired brightness is achieved.

The recommended load for the dimmer is between 20-90 watts.



Transformer Settings

100 Watt Transformer	
On	Turns unit on
Off	Turns unit off
Auto	Photocell Control "Auto" — Lights come on at dusk and go off at dawn
4H	Stays on 4 hours after dusk
6H	Stays on 6 hours after dusk
8Н	Stays on 8 hours after dusk

Post & Rail Preparation

5 x 5: RadianceRail

Post & Post Covers

(The following instructions are for a rail height of 36")

1 Trim 4x4 wood posts to 35-1/2" above deck surface.

2 Trim Post Covers to length: 38" for a lit post

40-1/8" for an unlit post

For best results, use a miter saw with a fine toothed blade to make Post Cover cuts. Check cuts for square.

Feed main 16/2AWG cable between post and Post Covers. (See Wire Connections section for more info.)

Run wires up corner voids created by Post Cover Ribs.

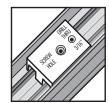


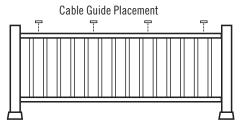
Railing

- Install Support Rails and Balusters as normal, DO NOT install Top Rail yet.
- 2 Drill a 5/8" hole through the Post Cover on centerline, directly above rail Mounting Blocks.



After running all wiring, secure four Cable Guides to Support Rail using #8 x 3/4" screws. Use the Cable Guides to pre-drill holes thru the Support Rail with a 3/16" bit.





- Make a notch on the centerline of the Top Rail by boring a 3/4" hole centered 1/2" back from the end of the rail, then cut it out to form an open slot.
- 4 Attach Top Rails before installation of Post Cap Lights. Use the holes that were pre-drilled through the Cable Guides to attach the Top Rail. FAILURE TO USE THESE HOLES MAY RESULT IN WIRE DAMAGE.

4 x 4: Ornamental Rail, RadianceRail Express

Post & Post Covers

(The following instructions are for a rail height of 36")

- Trim 4x4 wood posts to 34-1/2" above deck surface.
- 2 In order to provide clearance for wiring between the post and Post Cover you must create a wire channel.

Rout a 1/4" by 1/4" slot down the post

OR

Chamfer the corner of the post



NOTE: Do not rout a wire channel where a rail is to be mounted.

- If you plan to install a post mounted Accent Light, you must rout a slot down the post to the desired fixture position. (See Accent Light instructions.)
- 4 Trim Post Covers to length: 36-7/8" for a lit post 39" for an unlit post.

For best results, use a miter saw with a fine toothed blade to make Post Cover cuts. Check cuts for square.

Feed main 16/2AWG cable up or down post using prepared feature. (See *Wire Connections* section for more information)

Railing (Only for Ornamental Rail)

- Install Universal Rails and Balusters as normal, DO NOT install Top Rail yet.
- Drill a 5/8" hole through the Post Cover on centerline, directly above the Universal Rail.



3 After running all wiring, secure four Cable Guides to Universal Rail using #8 x 3/4" screws. Position every 4th Baluster, avoiding Balusters and Baluster Mounting Blocks if installed. Use the Cable Guides to pre-drill holes thru the Universal Rail with a 3/16" bit.



Make a notch on the centerline of the Top Rail by boring a 3/4" hole centered 1/2" back from the end of the rail, then cut itout to form an open slot.



6 Attach Top Rails before installation of Post Cap Lights. Use the holes that were pre-drilled through the Cable Guides to attach the Top Rail. FAILURE TO USE THESE HOLES MAY RESULT IN WIRE DAMAGE.



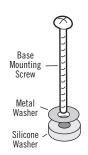
Installing Post Cap Light

Post Lamps must be installed after the rail assembly has been completed.

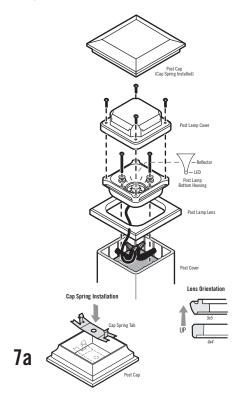


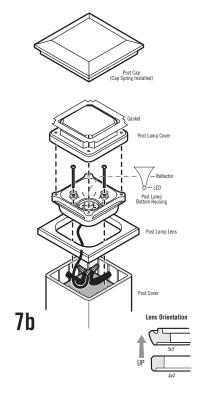
Before installing, refer to Post & Rail Preparation section

- 1 Install the Lens onto the Post Cover as shown.
- 2 Remove the Post Lamp Cover from the Post Lamp Bottom Housing.
- 3 Trim excess wire length and make wiring connections to 16/2AWG main cable and other 18/2AWG luminary wires. Check to confirm polarity of main cable connections.
- Coil the connected wires inside the Post Cover and insert the Post Lamp Bottom Housing into the Lens. Check to make sure no wires are exposed or pinched between Lens and Bottom Housing.
- (5) Install the mounting screws and washers assembled as shown. Watch as screws are installed to ensure that wires are clear of screw tip prior to driving them into the wood post. Tighten only until the silicone washer begins to compress. Over-tightening could break the Bottom Housing causing permanent damage.



- **6** Reinstall Post Lamp Cover and screws.
- For 5x5: Install Cap Spring into Post Cap as shown (place finger and thumb on Cap Spring tabs, flex gently until Cap Spring appears slightly bowed, insert Cap Spring into Post Cap approximately at the center of the opening until bowed back ends contact the inside top of the Post Cap then relax finger and thumb pressure). Press Cap Spring intoseated position as shown.
- For 4x4 (Includes Gasket): Set gasket centered on post lamp cover.
- Install Post Cap onto Post Lamp Cover.

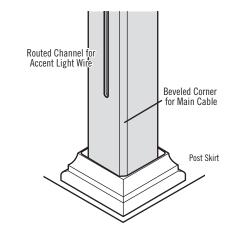


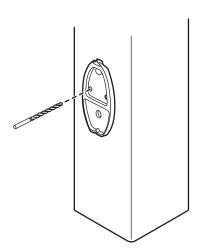


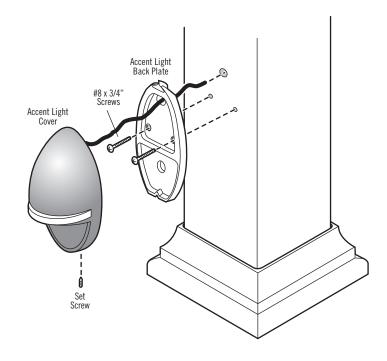


Installing Post Mounted Accent Light

- Accent Light wire channel must be routed during the installation of the Post Cover. The Post Cover and the wood post must be prepared in advance to accommodate installation of the Accent Light. (No post preparation is necessary for RadianceRail.)
- If using **Ornamental Rail, RadianceRail Express or BuilderRail,** prepare the wood post by routing a 1/4" wide by 1/4" deep wire channel up the center of the post on the face where the Accent Light will be mounted. For main cable, slightly bevel the corner of the 4x4 post.
- 2 If a Post Skirt is used, install it over the wood post before installing the Post Cover. You will not be able to install Post Skirt after Post Cover and Accent Light are in place.
- Remove Accent Light Cover from Accent Light Back Plate by loosening Set Screw located at bottom of Accent Light Cover.
- 4 Prepare the Post Cover in the following manner:
 - Cut the Post Cover to the desired length.
 - Determine the height the Accent Light will be mounted.
 - Mark the location of the wire hole and the mounting screw holes using the Accent Light Back Plate.
 - Drill a 3/8" hole for the wire and drill two 7/64" holes for the mounting screws.
- Route the Accent Light wire through the BackPlate then through the wire hole in the Post Cover then invert the Post Cover and allow the wire to extend out the top end of the Post Cover.
- 6 Hold the Accent Light Back Plate loosely in position and slide the Post Cover over the wood post and into the Post Skirt. Make sure the wire is in the routed wire channel.
- Attach the Accent Light Back Plate to the post using two #8 x 3/4" screws provided.
- 8 Re-install Accent Light Cover and secure with Set Screw with Allen Wrench.
- **9** Trim excess wire and make wiring connections. (See *Connections* section of manual).



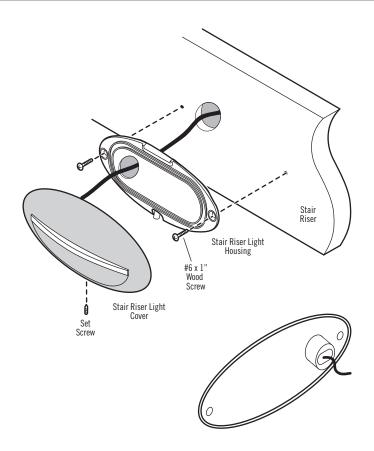






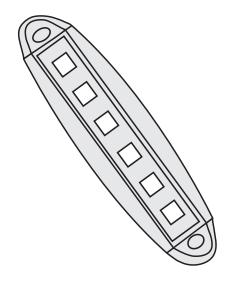
Installing Stair Riser Light

- Locate and mark vertical and horizontal centerlines for Stair Riser Light location. Level the back plate and secure using #6 x 1" wood screws
- ② Use the back plate as a template to locate the center of the 1-1/2" hole for the "bump out".
- 3 Cut a 1-1/2" diameter hole at the center point using a 1-1/2" spade bit.
- Trim excess wire length and make wire connection to main circuit wire using wire nuts provided.
- 6 Align the lighting "bump out" with the 1-1/2" hole and assure alignment between the Stair Riser light and the back plate.
- **6** Secure housing to back plate using the set screw with a 2.5mm Allen wrench.



Installing Under-Rail Light

- Choose the location for the Under-Rail Light so it is centered in the balusters.
- 2 Drill a 3/8" hole to feed the wire through the H Channel.
- **3** Feed the wire and mount the light to the recessed H Channel making sure the light is tilted in (light comes with a 15° tilt which is usually facing the deck). Use the center alignment beam for a guide for the 2 screws. Use 8-3/4" screw size.
- Trim excess wire length and make wire connection to main circuit wire using nuts provided.



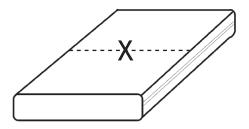


Installing In-Deck Light

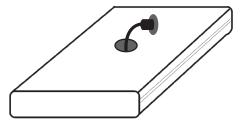
In-deck light should be installed in a low foot-traffic area.

In-deck light can only be used when there is room under the deck to access the wires to make all of the connections

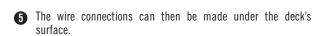
- 1 Locate and mark the centerline of the deck plank where the in-deck light will be mounted.
- 2 On the desired point of the center line, use a 1" spade bit to create a through hole (be sure not to drill into the substructure.)

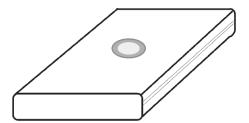


3 Guide the light's wire into the through hole.



4 Push the lighting fixture into the through hole until the flange touches the deck surface.





5-Year Limited DeckLites Warranty

Statement of Warranty: This warranty is given to the original purchaser, residential or commercial, ("Purchaser") of TimberTech DeckLites LED products ("DeckLites".) This warranty does not extend to fasteners that are not supplied by TimberTech.

TimberTech Limited ("TimberTech") warrants to Purchaser that for a period of five (5) years from the date of original consumer purchase (the "Term"), under normal use and service conditions, DeckLites will be free from defects in material and workmanship, and will not crack, peel, blister or corrode as a result of manufacturing defects.

All warranties are subject to the exclusions, limitations and restrictions set forth below.

Obtaining Warranty Performance: If Purchaser discovers a defect in the TimberTech Products during the Term, Purchaser must, within thirty (30) days from the discovery of the alleged defect but **no later than the end of the Term**, notify TimberTech in writing, at the following address:

TimberTech Limited • 894 Prairie Avenue • Wilmington, Ohio 45177 • Attn: Claims Department

Purchaser must include in this notification proof of purchase and a statement explaining the defect. TimberTech may request additional information. After reviewing all information, TimberTech will make a determination regarding the validity of such claim. If TimberTech determines that Purchaser's claim is valid, TimberTech will, at its option, either replace the defective TimberTech Products or refund the portion of the purchase price paid by Purchaser for such defective TimberTech Products (not including the cost of its initial installation). This warranty shall not cover, and TimberTech shall not be responsible for, costs and expenses incurred with respect to the removal of the defective TimberTech Products or the installation of replacement materials, including but not limited to, labor and freight. The foregoing remedies are the SOLE AND EXCLUSIVE REMEDY FOR BREACH OF ANY WARRANTY.

Transfer of Warranty: This warranty may be transferred one (1) time within the Term to a subsequent buyer of the property upon which DeckLites were originally installed. Transfer of this warranty does not extend the Term of the warranty.

Exclusions from Warranty Coverage: TimberTech does not warrant against and is not responsible for, and no implied warranty shall be deemed to cover, any damage or loss attributable to:
(1) improper installation of DeckLites and/or failure to abide by TimberTech's installation guidelines; (2) use of DeckLites in an application not recommended by the TimberTech installation guidelines (including, but not limited to, immersion or submersion of the products in water) and local building codes; (3) any act of God (such as flooding, hurricane, earthquake, lightning (or other incidences of excessive voltage), natural disaster, etc.), environmental condition (such as air pollution, mold, mildew, etc.), or staining from foreign substances (such as dirt, grease, oil, etc.); (4) variations or changes in color of DeckLites; (5) normal weathering due to exposure to sunlight, weather and atmosphere which can cause colored surfaces to, among other things, flake, chalk, or accumulate dirt or stains; (6) improper handling, storage, abuse or neglect of DeckLites by Purchaser, the transferee or third parties; (7) use in harsh industrial or marine environments; or (8) any fasteners not supplied by TimberTech.

Purchaser is solely responsible for determining the effectiveness, fitness, suitability and safety of DeckLites in connection with their use in any particular application.

Limitations: DISCLAIMER OF WARRANTIES: EXCEPT FOR THE EXPRESS WRITTEN WARRANTY CONTAINED HEREIN, TIMBERTECH MAKES NO OTHER WARRANTIES, GUARANTEES OR INDEMNITIES, WHETHER EXPRESS OR IMPLIED, ARISING BY LAW, COURSE OF DEALING, USAGE OF TRADE, CUSTOM OR OTHERWISE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY AND IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ALL SUCH OTHER WARRANTIES, GUARANTEES AND INDEMNITIES ARE HEREBY DISCLAIMED, OVERRIDDEN AND EXCLUDED FROM THIS TRANSACTION.

Some states do not allow limitations on how long an implied warranty lasts so the above limitation may not apply to you.

LIMITATION OF REMEDIES AND EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES: TIMBERTECH'S LIABILITIES ARE LIMITED SOLELY AND EXCLUSIVELY TO THE OBLIGATIONS SPECIFICALLY UNDERTAKEN HEREIN, AND UNDER NO CIRCUMSTANCES WILL TIMBERTECH BE LIABLE OR OBLIGATED FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR ANY OTHER DAMAGES OF ANY KIND WHATSOEVER (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOST SALES, LOSS OF GOODWILL, USE OF MONEY, USE OF GOODS, STOPPAGE OF WORK, OR IMPAIRMENT OF ASSETS), WHETHER FORESEEABLE OR UNFORESEEABLE, ARISING OUT OF BREACH OR FAILURE OF EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, FRAUD, MISREPRESENTATION, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, EXCEPT AND ONLY TO THE EXTENT THIS LIMITATION IS SPECIFICALLY PRECLUDED BY APPLICABLE LAW OF MANDATORY APPLICATION. TIMBERTECH'S LIABILITY WITH RESPECT TO DEFECTIVE PRODUCTS SHALL IN NO EVENT EXCEED THE REPLACEMENT OF SUCH PRODUCTS OR REFUND OF THE PURCHASE PRICE. AS DESCRIBED ABOVE.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Miscellaneous: This writing is understood and intended to be the final expression of the parties' agreement and is a complete and exclusive statement of the terms and conditions with respect thereto, superseding all prior agreements or representations, oral or written, and all other communication between the parties relating to the subject matter of this agreement. This warranty may not be altered or amended except in a written instrument signed by TimberTech and Purchaser or permitted transferee. No agent, employee or any other party is authorized to make any warranty in addition to that made in this agreement and TimberTech shall not be bound by any such statements other than those contained in this warranty.

This warranty shall only be applicable and enforceable in the United States of America.

This warranty is effective for consumer purchases made on or after January 1, 2009.

Copyright (c) 2009 TimberTech.



Every TimberTech product is backed by exceptional customer service and a commitment to quality

Warranty Registration is Easy

- The easiest way to register a warranty is to visit www.timbertech.com and select the Warranty & Care link, then select Register Online.
- You may prefer to fill out the Warranty Card below and mail it to TimberTech, accordingly to the instructions on the card.

Remember, to ensure your product is covered by the TimberTech Warranty it must be installed properly.

TimberTech LTD disclaims any liability or responsibility for the improper installation of this product. The purchaser is solely responsible for compliance with applicable local codes as to the deck's intended use. TimberTech recommends all designs be reviewed by a licensed architect, engineer or local building official before installation. TimberTech maintains a list of physical properties to assist the design professional.

Below is a chart showing which product each warranty covers. You can view warranty details online at www.timbertech.com:

Limited 25-Year Residential Warranty / Limited 10-Year Commercial Warranty

Decking: DockSider, Floorizon, ReliaBoard Plank, ValuPlank, Earthwood, TwinFinish, XLM

Railing: Ornamental Rail, RadianceRail, BuilderRail (excluding all metal baluster components of BuilderRail System),

Secure - Mount Post System, ADA Hand Rail System

Fencing: All FenceScape products **Accessories:** CONCEALoc, DrySpace

- Limited 10-Year Warranty for Metal Baluster Components of BuilderRail System
- Limited 5-Year Warranty for DeckLites System

To Make a Claim

To make a claim under either warranty, purchaser or the transferee, must send to TimberTech, within the warranty period referred to above, a description of the claimed defect and proof of purchase. Warranty Information Packets can be obtained from TimberTech.

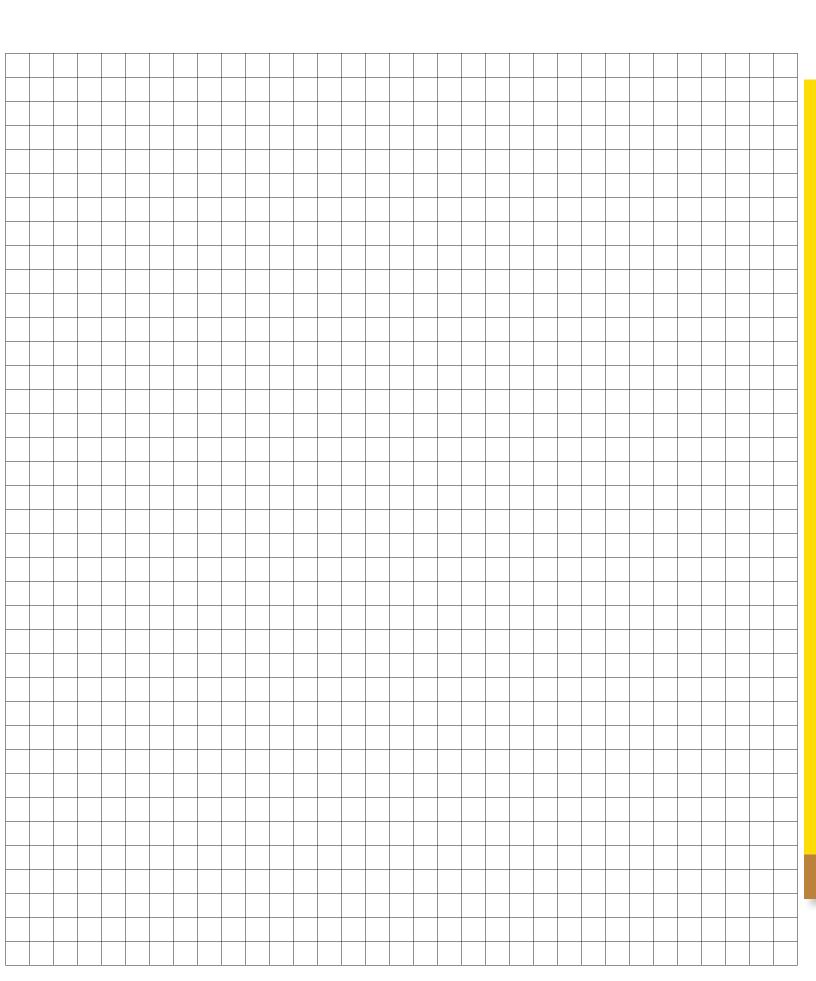
TimberTech Limited

Attn: Claims Department • 894 Prairie Avenue, Wilmington, Ohio 45177 • Or call 1-800-307-7780

TimberTech Customer: Please complete this war- ranty card and mail to:	Name:
TimberTech 894 Prairie Avenue Wilmington, Ohio 45177 Attn: Warranty	Product Information: Where was your product purchased? How was your product installed? Contractor Name: Self-Installed
This information will help us better serve your needs. Please return warranty card within 30 days of receipt of product.	Warranty Registration: Check the TimberTech product that you purchased: Decking:
	☐ DrySpace™ ☐ DeckLites® ☐ FenceScape®
TimberTech Less Work. More Life	Demographic Information: Number of residents in household:



Notes



It's not just a deck. It's TimberTech.



