

Lighting systems from Tegan Lighting are supplied as complete systems. Use only factory-supplied parts to preserve the validity of the ETL/UL listing and manufacturer's warranty.

Tegan Lighting system hardware is intended for installation in accordance with the National Electric Code and local regulations. To ensure full compliance with local codes and regulations, check with your local electrical inspector before installation.

1. When installing or using this lighting system, basic safety precautions should always be followed, including the following:

- Read all instructions and use only as described in these Tegan Lighting Installation Instructions. Failure to follow installation instructions, or failure to heed all installation precautions, could result in falling fixtures which could cause serious injury or death. Failure to properly connect electrical systems could result in permanent system failure, as well as fire, shock, or electrocution.
- Disconnect electrical power before adding to or changing the configuration of the lighting run, or changing any accessory/shade.
- Do not attempt to energize anything other than Exton luminaires on the Powerspan Cable enclosed in the Rigid Trac extrusion.
- To reduce the risk of fire and electric shock, do not attempt to connect power tools, extension cords, appliances, and the like to the Rigid Trac.
- Wire only into the output of a dedicated Exton 24VDC driver provided by Tegan Lighting.
- This system is for 24VDC Exton Spotlights only; it must be used with an appropriate 24VDC power supply provided by Tegan Lighting. Refer to Specification Sheets.
- Use only Tegan Lighting supplied accessories. Do not hang non-Exton devices (signs, etc.) on the Rigid Trac.
- To ensure proper installation, we recommend having a qualified electrician install this product.
- Hardware provided by others. Use fasteners as per the specification of a licensed structural engineer for the mounting substrate.
- This system must be wired and grounded in accordance with accepted electrical installation practices, local codes, and ordinances.
- Wire supply connections must be made with U.L. or comparable testing agency-approved connectors.
- Turn off electrical power before modifying the lighting system in any way.



Contact Tegan Lighting with any installation questions. Any modifications on site that are not compliant with the installation instructions will void the warranty and listing. In addition, Tegan lighting will not cover any charges without pre-approval. No exceptions.

**Overview:**

- Maximum Run: 100' from Power Supply location.
- Maximum # of LED Modules per Run/Circuit: 40. Refer to the chart on page 5 for recommendations.
- Installation Location: Exton Rigid Trac is not approved or listed for indoor pool/sauna installations. If it is a known issue that alloy 304 stainless (or 6061/6063 aluminum) corrodes easily, then it's an environment to not install Exton.

Exton Rigid Trac Installation

1. Remove cover with four screws. Make electrical connections from Tegan Remote Power 24VDC Supply to Rigid Trac Floating Power Feed. Note orientation of Trac. **Caulk around ceiling opening then attach to outlet box with screws.**

2. Install Exton Rigid Trac Base onto building, using small screws (#6) (by others) every 24" or less.

3. Carefully strip jacket of Powerspan Cable around desired connection point. Spread two conductors and carefully remove 1/2" of insulation from copper wires. Cut the central stainless steel wire.

4. Unthread nut from internal power bolts and press the stripped conductors into each power bolt. Tighten nuts back on firmly. Powerspan may be connected in the middle (shown) or at one end. Use provided plug to fill the opening in the Power Feed for single-end connection.

5. Fill around powerbolts with supplied dielectric paste, then affix cover back on with four screws.

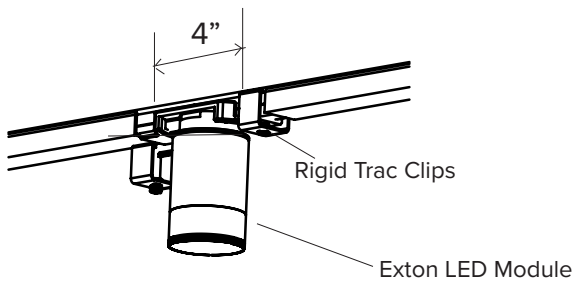
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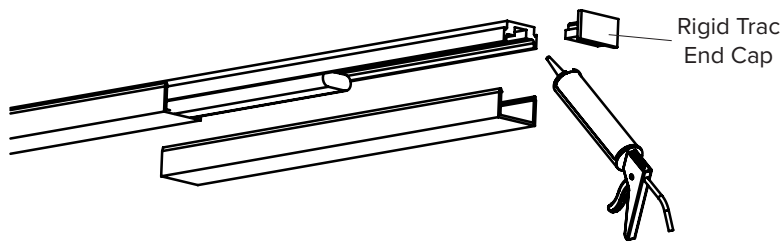
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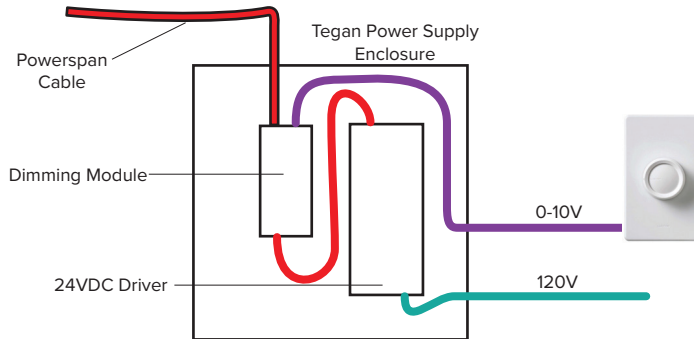


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6. Working outwards from Floating Feed, carefully support the length of Powerspan cable as close to Trac while the cover is applied. Snap cover over cable, onto Trac. A rubber mallet can be used to move cover along Trac short distances to reduce visible seams between sections. Cover can be cut with a chop saw; straight cuts are required, and debur the edges.
7. Where an Exton LED module is to be mounted, leave a 4" gap between two sections of cover. **Ensure module has a small dab of dielectric paste around prongs.** Taking care not to bend prongs, press module into exposed Powerspan Cable by hand. Then, snap clips over Trac, and tighten set screws to fully press module into the Powerspan cable.
8. At end of run, use supplied silicone sealant to seal the cut end of the Powerspan Cable, and to seal the End Cap into the Trac.

Tegan's Power Supplies consist of an enclosure with a 24VDC driver and an optional Dimmer Module.  
Wire into the output of a dedicated Exton 24VDC driver provided by Tegan Lighting (only).



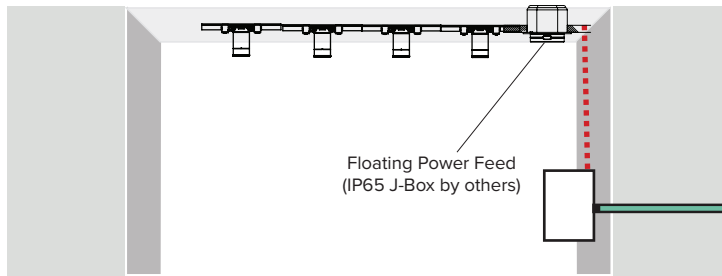
**Loading and Operation Guidelines:**

It's important not to exceed these guidelines in order to prevent damage to the Power Supply or cause problems with performance:

- Load power supplies at 80% of their maximum nominal output.
- Do not exceed 100 feet between last EX5 module (i.e. the module farthest away from the Power Supply) and the Power Supply.
- Do not group EX5 modules near the end of a long run; on a 60 foot span, keep the average distance from EX5s to Power Supply about 40 feet.
- The length of the Powerspan Cable, and any intermediate remote wiring, must be counted together (ie with a 60' span, and 40' of building wire between the start of the span and the powersupply, one would be at the maximum 100' distance).
- Do not operate in environments above 40C/104F ambient air temperature.
- Do not operate where the sun's radiation causes any metal surface to be greater than 40C/104F.
- The Polarity of the drivers output to the Exton Powerspan Cable does not matter.



## Exterior Power Supply with Direct Hookup



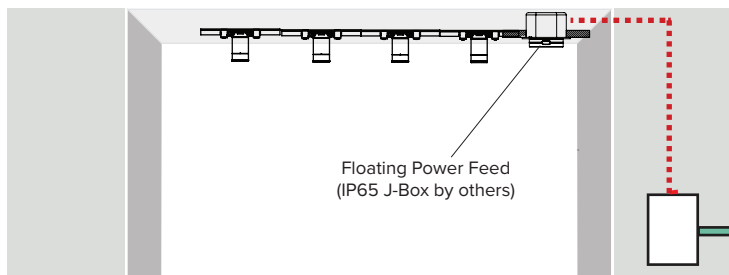
Tegan's IP24 or IP66 Power Supply may be mounted on outside of building with Exton Powerspan Cable directly running into it with waterproof fitting (by others). Line Voltage (green) enters through building, or through external conduit, or through underground feeder cable, by others. The Power Supply outputs 24VDC (red). Each EX5 module draws 7W, or .3A.



Keep distance from Power Supply to last fixture less than 100'. Exceeding this distance can result in malfunctioning (dark or flickering) Exton modules.

Line Voltage Wire by others (as per code).

## Interior Power Supply with Remote Powerfeed



Tegan's IP20 Interior Power Supply is connected to the Remote Power Feed. Line Voltage (green) supplies the Power Supply with standard internal wiring (typical 10 AWG) by others.

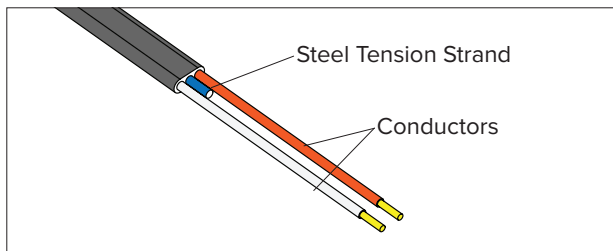
Wattage Guidelines for Power Supply

Qty of LED Modules per Driver Capacity	
Description	Max # of Kore-EX5 Fixtures
40W Non-Dimming Driver	4
40W 0-10V Dimming Driver	4
60W Non-Dimming Driver	7
60W 0-10V Dimming Driver	7
100W Non-Dimming Driver	11
100W 0-10V Dimming Driver	11
150W Non-Dimming Driver	17
150W 0-10V Dimming Driver	17
240W Non-Dimming Driver	27
240W 0-10V Dimming Driver	27
320W Non-Dimming Driver	36
288W 0-10V Dimming Driver	32

Exton Rigid Trac System Installation

1. We have listed the maximum number of Kore EX5 Modules for each Driver option above based on the following common practice:  
**Recommended De-Rating:** Like all electronic power supplies, life is significantly increased when loads are 75/80% or less of the nominal power capacity.  
 Best life is in climate controlled conditions, or when the power supply stays below 70C. The type of enclosure and ambient environment can affect the operating temperature, and therefore the lifetime of the power supply. For all Tegan Lighting enclosures, load power supplies to only 75/80% of their nominal. These are general suggestions to increase the life of the supply in moderate climates; the actual operating lifetime of the power supply depends on the actual environment and use. Do not operate the power supplies during the day with direct sunlight with extreme hot temperatures.
2. Do not exceed a maximum of 40 Exton LED Fixtures per run/circuit.
3. **VOLTAGE DROP:**  
 To calculate the maximum Exton span, add the desired span distance to the wiring distance between the power supply and the start of the Exton span cable. This is the "total run." All wiring used between the power supply and the start of the Exton cable should be 10AWG or thicker. At 250W loads, the maximum advisable total run length is 150'. At 100W loads, the total run length is 250'.





### Exton Powerspan Cable

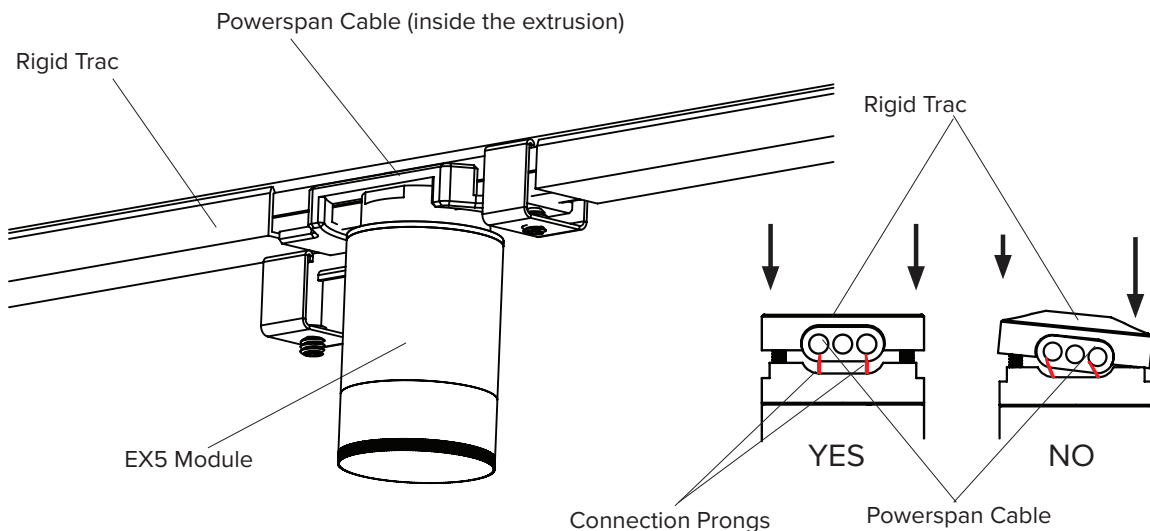
Exton Powerspan Cable contains two #10 AWG stranded copper conductors alongside a central strand of steel support cable. To access the conductors, carefully start a slit in outer jacket and pull the conductors out, letting them “unzip” the slit.

Use wire-rope cutters, or if necessary a cutoff wheel, being careful not to nick conductors.

## EX-5 Fixture Installation

### EX5 Module

Do not open EX5 modules. If the EX5 fixture is opened, it WILL VOID THE WARRANTY AND IP65 LISTING. Modules can be wired “Live” to allow for convenient testing.



Tighten so there are no visible gaps.

### Module Installation

Exton Module attaches with insulation-displacement Connection Prongs.

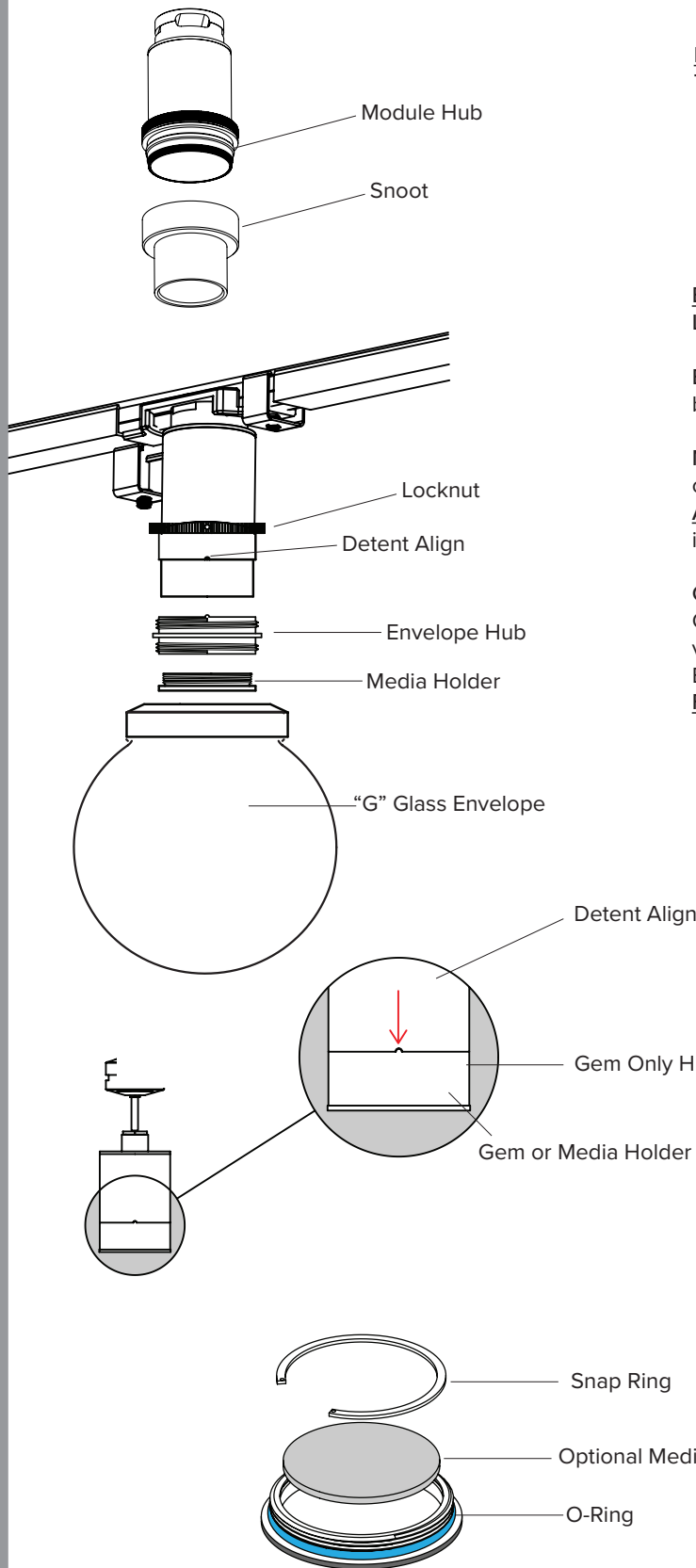
### Moving the Module

Remove Cable Clamp Top. Apply silicone to any openings or damage in cable jacket. Cable's self-sealing properties may be compromised by tension (from wind, ice) or atmosphere (heat, ozone). Silicone can help ensure small openings do not collect water and corrode internal conductors.

The Connection Prongs must penetrate without bending; **do not attempt to rock or tilt them in.** **Tighten each screw only 1 turn before alternating.** If contact is not made, disassemble, then straighten prongs, then try again.

Exton Powerspan Cable and LED Module connections should not be made below the outdoor ambient temperature of 50F/10C.

Exton Rigid Trac System Gem, Envelope, Media Holder Installation



**Downlight Snoot Installation**

Thread Snoot onto hub until snug. Do not overtighten.

**Envelope Installation**

Locknut: Must be inserted over EX5 Module first.

Envelope Hub: Threaded on top for locknut. Threaded on bottom side for Glass Envelope.

Media Holder or Gem: This retains the Envelope Hub, or the Gem-Only Hub. **NOTE SMALL TAB WHICH MUST ALIGN TO DETENT IN EX5.** Ensure Media Holder or Gem is on tight for proper O-ring sealing.

**Glass Envelope (optional):**

Glass Envelope (“G” Shape shown) threads onto the Envelope Hub, after the Media Holder is fully tightened on. Ensure this is on tight for proper gasket sealing. **APPLY FORCE TO METAL COLLAR ONLY, NOT TO GLASS.**

**Media Holder Installation**

Media (optional): Use one glass Media.

Snap Ring: Retains Media into Media Holder.

Hexcel: Not shown, Hexcel Louver replaces snap ring if used with another Media element. Due to its compressed fit, it holds the glass Media element into Media Holder.

O-Ring: Seals against inside of EX5 when fully tightened. Gems and Media Holders both require O-rings.





## EXTON TRAC SYSTEM LIMITED WARRANTY

This limited warranty (“**Limited Warranty**”) applies to Exton Trac and Monopoint Systems (the “**Products**”) sold by Tegan Lighting (the “**Company**”) or its retail partners. This Limited Warranty does not apply to any paper or nylon shade accessory to the Products—the Company makes no warranty as to any paper or nylon shade accessory to the Products. The obligations under this Limited Warranty are only to the owner of the building or home in which the Products are installed, at the time in which the Products are installed. The Limited Warranty cannot be assigned or transferred, including to a subsequent purchaser of the building or home. This Limited Warranty applies only to Products purchased in the United States.

### Limited Warranty

The Company warrants that the Products will be free from material defects in materials and workmanship under normal use for a period of three years from the date of your purchase (“**Warranty Period**”). Your sole and exclusive remedies for warranty claims submitted pursuant to this Limited Warranty are as follows:

For all Products that contain or develop a material defect in materials or workmanship during the Warranty Period, the Company will do one of the following: (1) repair the Product, (2) replace the Product with a like product, or (3) refund your purchase price for the Product (taxes, shipping and handling costs excluded). The Company has the sole discretion to decide which of these three options to use. If the Company replaces the Product pursuant to this Limited Warranty, a new Warranty Period of three years will apply to the replacement Product.

### Warranty Claim Procedure

All claims pursuant to this Limited Warranty must be submitted in accordance with the procedures described in this section, and must be submitted within the Warranty period.

To make a Limited Warranty claim, you must contract your local selling Manufacturer’s Representative, and provide the Manufacturer’s Representative with the following information, in addition to any information requested by the Manufacturer’s Representative: (1) proof of purchase, including date of purchase; (2) a description of the problem or defect, along with any supporting documentation, including photographs; (3) the date the defect was first discovered; and (4) your name, address, and phone number.



**Warranty Claim Procedure (cont'd)**

The Manufacturer's Representative will then provide the details of your claim to the Company. The Company will review your claim and then you will be notified whether the claim is denied or accepted, or whether the Company needs additional information. If the Company or Manufacturer's Representative requests additional information from you, then you must provide the information within 30 days of the requests or your Limited Warranty claim becomes void.

If the Company accepts your claim, you will be sent a Return Goods Authorization ("RGA") number and provide you with further instructions on where to ship the Product. You must return the Product, your proof of purchase, the RGA, and anything else requested by the Company or Manufacturer's Representative within 30 days of the date the RGA was sent to you; if you fail to do so, your Limited Warranty claim becomes void. The Company will not pay for any labor costs incurred by you prior to acceptance of a Limited Warranty Claim. If the Company accepts a Limited Warranty Claim, it will only pay for labor costs expressly approved by the Company in writing.

**Exclusions**

This Limited Warranty does not apply to: (1) normal wear and tear and (2) defects or damage caused by misuse (including, but not limited to, failure to follow any instructions for installing and using the product, and failure to properly winterize the Product); tampering; accident; neglect; abuse; alteration; modification; improper or unauthorized repair; improper storage; acts of God (including weather-related events and wind velocity exceeding 27 (tree mount) or 40 (structure mount) Knots); or animals. The Company is not responsible for damages arising from or related to the failure to follow instructions relating to the installation and use of the Product, regardless of whose improper installation or use causes the damage. If the Product is not installed in accordance with the Company's installation instructions, or if the Product is tampered with after installation, the Limited Warranty immediately becomes void.

**Limitation of Damages and Implied Warranties**

TO THE FULL EXTENT PERMITTED BY LAW, THIS WARRANTY DOES NOT COVER, AND TEGAN LIGHTING IS NOT RESPONSIBLE FOR: (A) SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING, BUT NOT LIMITED TO, LOSS OF USE, LOSS OF REVENUE, LOSS OF ACTUAL OR ANTICIPATED PROFITS (INCLUDING LOSS OF PROFITS ON CONTRACTS), LOSS OF THE USE OF MONEY, LOSS OF ANTICIPATED SAVINGS, LOSS OF BUSINESS, LOSS OF OPPORTUNITY, LOSS OF GOODWILL, LOSS OF REPUTATION, INJURIES TO PERSONS, OR DAMAGES TO PROPERTY (OTHER THAN DAMAGES TO THE PRODUCT ITSELF).



### **Limitation of Damages and Implied Warranties (cont'd)**

TO THE FULL EXTENT PERMITTED BY LAW, THIS WARRANTY DOES NOT COVER, AND TEGAN LIGHTING IS NOT RESPONSIBLE FOR: (A) SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING, BUT NOT LIMITED TO, LOSS OF USE, LOSS OF REVENUE, LOSS OF ACTUAL OR ANTICIPATED PROFITS (INCLUDING LOSS OF PROFITS ON CONTRACTS), LOSS OF THE USE OF MONEY, LOSS OF ANTICIPATED SAVINGS, LOSS OF BUSINESS, LOSS OF OPPORTUNITY, LOSS OF GOODWILL, LOSS OF REPUTATION, INJURIES TO PERSONS, OR DAMAGES TO PROPERTY (OTHER THAN DAMAGES TO THE PRODUCT ITSELF).

INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM JURISDICTION TO JURISDICTION.

All implied warranties (including the implied warranties of merchantability and fitness for a particular purpose) are limited in duration to the Warranty Period. All such implied warranties are expressly disclaimed for periods beyond the Warranty Period.

Some jurisdictions do not allow limitations on the duration of an implied warranty, so this limitation may not apply to you.

### **Governing Law and Disputes**

This Limited Warranty (and any non-contractual disputes/claims arising out of or in connection with them) are subject to the laws of the state of California, United States of America, without regard to choice or conflicts of law principles. The parties expressly agree that the provisions of the Limited Warranty or to their relationship.

Further, you and the Company agree to the jurisdiction of the Northern District of California to resolve any dispute, claim, or controversy that relates to or arises in connection with the Limited Warranty (and any non-contractual disputes/claims relating to or arising in connection with them) and is not subject to mandatory arbitration under Limited Warranty, or, if that court lacks jurisdiction, the Superior Court of California of the County of Marin.

You and the Company agree that any dispute, claim, or controversy between you and the Company arising in connection with or relating in any way to these Agreements or to your relationship with the Company as a user of the Service (whether based in contract, tort, statute, fraud, misrepresentation, or any other legal theory, and whether the claims arise during or after the termination of the Limited Warranty) will be determined by mandatory binding individual (not class) arbitration.

