

iCOLOR FLEX SL

USER GUIDE

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iColor Flex SL ITEM#
101-000018-00 (4" White, Translucent Dome)
101-000018-01 (4" White, Clear Dome)
101-000018-02 (4" White, Translucent Tall)
101-000018-03 (4" White, Clear Tall)
101-000021-00 (4" Black, Translucent Dome)
101-000021-01 (4" Black, Clear Dome)
101-000021-02 (4" Black, Translucent Tall)
101-000021-03 (4" Black, Clear Tall)
101-000026-00 (12" White, Translucent Dome)
101-000026-01 (12" White, Clear Dome)
101-000026-02 (12" White, Translucent Tall)
101-000026-03 (12" White, Clear Tall)
101-000027-00 (12" Black, Translucent Dome)
101-000027-01 (12" Black, Clear Dome)
101-000027-02 (12" Black, Translucent Tall)
101-000027-03 (12" Black, Clear Tall)

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Specifications subject to change without notice. Refer to www.colorkinetics.com for the most recent data sheet versions.

GETTING STARTED

The Color Kinetics® iColor® Flex SL strand is designed for accent or perimeter lighting or as a component of a custom fixture. iColor Flex SL provides lighting professionals with a building block to create and design custom applications such as curtain walls, or to line a building facade for use with custom effects or animation. This guide contains important information about installing and operating your new iColor Flex SL safely and accurately.

Included In This Box

- (1) iColor Flex SL light strand (50 nodes)
- (1) Extra Termination cap including rubber seal boot (for field cutting, if needed)
- User Guide

Optional Items

- iColor Flex SL Mounting Track (ITEM # 101-000024)
- iColor Flex SL Single Node Holder (ITEM # 101-000039)

Additional Items Needed

- Node Mount Hardware: #6 flat head screw
- Track Hardware: Staples or flat head screws suitable for mounting surface
- Electronic grade RTV Silicone (UL recognized)
- PDS-60ca 7.5V Power Supply (ITEM # 109-000015-00/03). One PDS-60ca is needed for every 2 runs of iColor Flex SL. (Maximum nodes per PDS-60ca 7.5: 100.)
- Tools (screw gun, stapler, pliers, wire cutters, flat screw driver)



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Scope of This User Guide

The goal of this user guide is to explain the steps necessary to install iColor Flex SL and assure peak performance. Its intended use is for reference only, by a fully qualified electrician or technician. This document should never be considered a substitute for any provision of a regulation or state and/or local code.

Identification and Warnings of Safety Hazards

In accordance with ANSI Z535.4-2002 the following system of identifying the severity of the hazards associated with the products is used:

“DANGER” Imminently hazardous situation which, if not avoided, will result in death or serious injury.

“WARNING” Potentially hazardous situation which, if not avoided, could result in death or serious injury.

“CAUTION” Potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property damage. Also used to alert against unsafe practices.

IGNORING A HAZARD WILL VOID ANY WARRANTY.

DANGER: Ensure that the main power supply is off before installing or wiring iColor Flex SL and PDS-60ca 7.5V power/data supply.

WARNING: iColor Flex SL and PDS-60ca 7.5V power/data supply must be installed by a qualified electrician or technician in accordance with NEC and relevant local codes.

WARNING: Do not attempt to install or use iColor Flex SL or PDS-60ca 7.5V until you read and understand the installation instructions.

WARNING: Do not use iColor Flex SL if any cables are damaged.

CAUTION: iColor Flex SL has no serviceable parts. Do not attempt to open the nodes.

CAUTION: Ensure that mounting track, node holders, and iColor Flex SL are securely attached, properly mounted, and free of excessive vibration.

CAUTION: Do not use sharp tools near or on the fixture lens or cable.

CAUTION: Do not hot swap. Ensure that the power supply is off before connecting or disconnecting fixtures.

NOTE: The instructions and precautions set forth in this user guide are not necessarily all-inclusive, all conceivable, or relevant to all applications as Color Kinetics cannot anticipate all conceivable or unique situations.

Owner/User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate iColor Flex SL in such a manner as to comply with all state and local laws, ordinances, regulations, and the American National Standards Institute Safety Code.

PLANNING THE INSTALLATION

The iColor Flex SL installation requires planning to ensure timely, successful installation and operation with minimal complications and down time.

Installation Considerations

When planning an iColor Flex SL installation, Color Kinetics suggests doing the following:

- Consult an Electrical Inspector to review all wiring plans.
- Refer to local and state codes for installation compliance.
- Create a Mapping Grid. Use this grid to record light addresses and power supply locations for easy reference.
- Consult Color Kinetics Application Engineering Services, as needed, at support@colorkinetics.com.

CONFIGURING iCOLOR FLEX SL

The way in which iColor Flex SL is addressed depends on the method of control and the PDS-60ca 7.5V power/data supply that you choose.

PDS-60ca 7.5V DMX/Ethernet: The DMX interface is used for installations using a DMX controller such as an iPlayer 2, ColorDial, or a third party DMX controller. The Ethernet interface is designed to work with Light System Manager or Video System Manager for large installations.

PDS-60ca 7.5V Preprogrammed: The preprogrammed unit is best suited for installations using simple effects across all light nodes. The preprogrammed unit controls a maximum of 144 nodes. The preprogrammed shows are: Chasing Rainbow, Fixed Color, Color Wash, Random Fade, Tile Burst, and Tile Spiral.

WARNING: Each light node in this product includes electronics which can fail, resulting in extreme heat. Keep away from flammable materials. Failure to do so could result in death or serious injury and will void the warranty.

WARNING: iColor Flex SL should be installed by a qualified electrician or technician in accordance with NEC and relevant local codes. Failure to comply could result in death or serious injury and will void the warranty.

WARNING: Ensure the power is off before installing iColor Flex SL. Failure to do so could result in death or serious injury and will void the warranty.

CAUTION: Do not hot swap. Ensure that the power supply is off before connecting or disconnecting fixtures. Hot swapping may result in minor or moderate injury or property damage and will void the warranty.

STEPS TO A SUCCESSFUL INSTALLATION

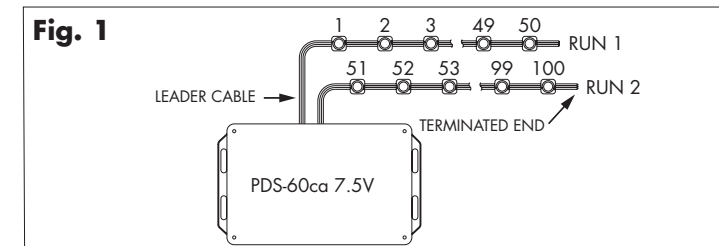
1. Determine the location of the power supply(s).
2. Install tracks and/or individual mounts.
3. Install iColor Flex SL.
4. Connect fixtures to the PDS-60ca 7.5V.
5. Connect data.

Details for each step are provided in the following sections.

Determining the Location of the Power Supply(s)

1. Determine a location out of direct view for the power supply(s).
 - One PDS-60ca 7.5V power/data supply is needed for every 2 runs (50 nodes each) of iColor Flex SL fixtures.
 - The power/data supply can be located up to 20 feet (6 m) from the first node in the series.

NOTE: Nodes are sequentially addressed going away from the PDS-60ca 7.5V power/data supply. Therefore, placement of the power/data supply in relation to the light nodes and desired effects is critical, especially when using the pre-programmed effects. See Fig. 1.

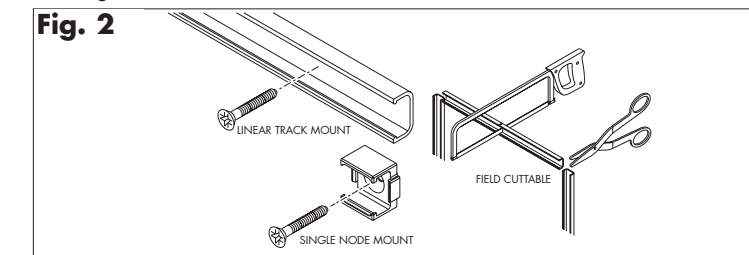


2. Using a pencil or chalk line, mark a centerline path for the nodes to follow. For linear installations, the iColor Flex SL Track is ideal for maintaining linear alignment and cable management. Single Node mounts work well with complex geometries. Install the iColor Flex SL on horizontal or vertical surfaces to accommodate your lighting environment.

Installing Tracks and/or Individual Mounts

Tracks: The plastic track can be field cut with a hacksaw or tin snips. Cut track to desired length. Using flat head screws suitable for the mounting surface, drive screws through the plastic track into the mounting surface. See Fig. 2. Recommended maximum spacing between screws is 16 inches (41 cm).

Single Node Mounts: Using double sided tape on base of mount, adhere single node mounts to the attaching surface. Reinforce installation with #6 flat head screws suitable for mounting surface. See Fig. 2.



NOTE: Ensure that the distance between single node mounts accommodates cable length from node to node and allows for cable bending when necessary. Use caution to avoid cable strain.

WARNING: Ensure the power is off before cutting iColor Flex SL. Failure to do so could result in death or serious injury and will void the warranty.

CAUTION: Do not cut leader cable. Doing so may result in minor or moderate injury or property damage and will void the warranty.

Installing iColor Flex SL

iColor Flex SL can be cut to the desired length. The cable end must be sealed. When possible, cut and seal the cable prior to installation.

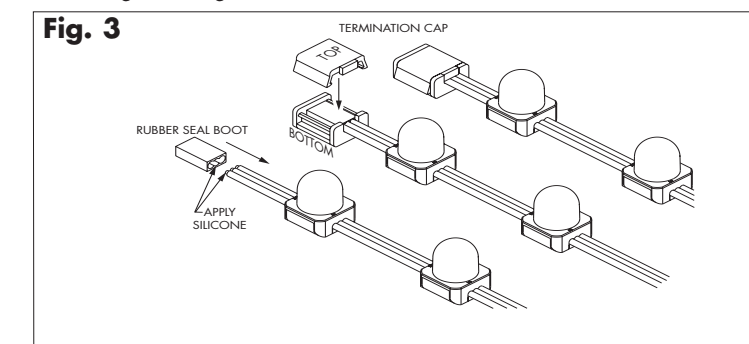
- Using a wire cutter, cut the cable, leaving at least one inch of cable after the last node.

NOTE: Ensure that the cut is clean and that there are no frayed wires touching other wires.

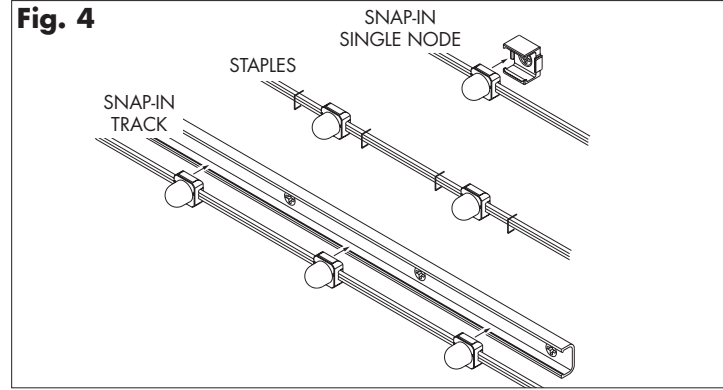
- Apply a liberal amount of RTV silicone to the cable ends and to the opening of the rubber seal boot. Insert the boot onto the cable.

- Sit the sealed cable boot into the base of the termination cap provided by Color Kinetics. Never try to reuse a termination cap.

- Firmly press the termination cap top onto the base until the top snaps into place. If using pliers, use caution not to crack the housing. See Fig. 3.



- When using the track or single node mounts, simply push the light nodes into the mounts. See Fig. 4.

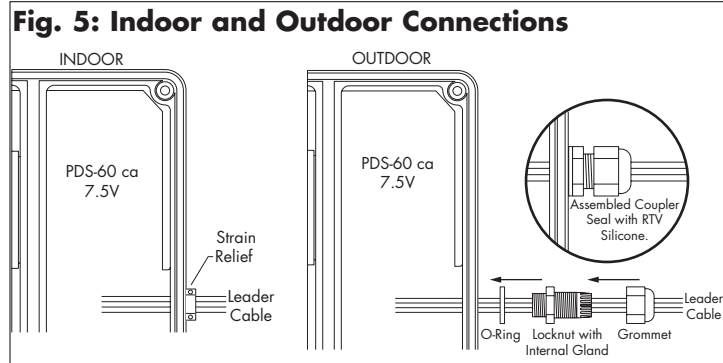


- When not using the optional node and track mounts, iColor Flex SL can be install using 1/2" staples. See Fig. 4.

Caution: When using staples to install iColor Flex SL, ensure that the staples do not pierce or damage the cable. Failure to do so may result in minor or moderate injury or property damage and will void the warranty.

Connecting Fixtures to the PDS-60ca 7.5V

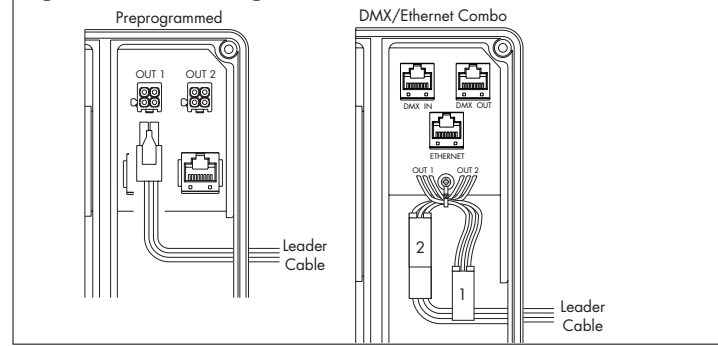
1. Insert the iColor Flex SL leader cable into the power out/data connection chamber of the PDS-60ca.
 - For indoor rated fixtures, use a standard screw connector strain relief to hold the cable. See Fig. 5.



- Outdoor rated fixtures have water-tight couplers on the cables. Ensure that the water-tight coupling is properly installed and sealed with RTV Silicone to ensure NEMA 4 protection. To make the watertight connection:
 - Separate the watertight grommet and locknut.
 - Insert the locknut through O-ring and into the conduit hole and tighten. Tighten until O-ring is engaged.
 - Ensure that the cable inside of the PDS-60ca has slack, then tighten grommet over the locknut. Tighten until cable is held secure and functioning in strain relief capacity. O-ring and internal gland nut must be engaged to create a water-tight seal. See. Fig. 5.

2. Plug the connector on the leader cable into a power output receptacle in the PDS-60ca 7.5V power/data supply. Power outputs on the PDS-60ca 7.5V are labeled Out 1 and Out 2. (See Figure 6).

Fig. 6: Connecting Fixtures to PDS-60ca 7.5V



Connecting Data

- Data is connected to the iColor Flex SL via the PDS-60ca 7.5V power/data supply.
- Data connections vary depending on the type of data used with the PDS-60ca 7.5V power/data supply. See the figures below.
 - Fig. 7: Preprogrammed Control
 - Fig. 8: DMX Control (using DMX/Ethernet PDS-60ca 7.5V)
 - Fig. 9: Ethernet Control (using DMX/Ethernet PDS-60ca 7.5V)

For complete instructions and wiring diagrams for your power/data supply, refer to the appropriate PDS-60ca User Guide and wiring diagrams located at www.colorkinetics.com/support.

If any problems occur during use, unplug the product immediately and call or email the Color Kinetics Technical Support Group at 1-888-FULL RGB or 617-423-9999 or www.colorkinetics.com/support.

iCOLOR FLEX SL SPECIFICATIONS

COLOR RANGE	64 billion (36-bit) additive RGB colors; continuously variable intensity
SOURCE	150 LEDs packaged in 50 Tri-color (Red, Green, and Blue) nodes
HOUSING	Rigid plastic, approx. 5/8" x 5/8" x 3/4"H (1.6 cm x 1.6 cm x 1.9 cm)
LISTINGS	UL/cUL, CE
DATA INTERFACE	Color Kinetics data interface system
CONTROL	Ethernet, DMX512 or stand-alone
POWER REQUIREMENT	7.5VDC
POWER CONSUMPTION	25W Max. at full intensity (full RGB), per 50 node strand
POWER SUPPLY	Color Kinetics PDS-60ca 7.5V (Preprogrammed 109-000015-00, DMX/Ethernet 109-000015-03)
POWER INPUT	100VAC to 240VAC autoranging (50-60Hz) Power correction factor (PFC)
HEAT DISSIPATION	25 percent of total power output
HOUSING	NEMA 4 indoor/outdoor rated enclosure
CONNECTORS	Data: RJ45 input/output connectors Power: 3-pin screw terminal
TEMPERATURE RANGE	-4°F to 122°F (-20°C to 50°C) based on testing of specific product
PROTECTION RATING	IP66

Fig. 7: Preprogrammed Control

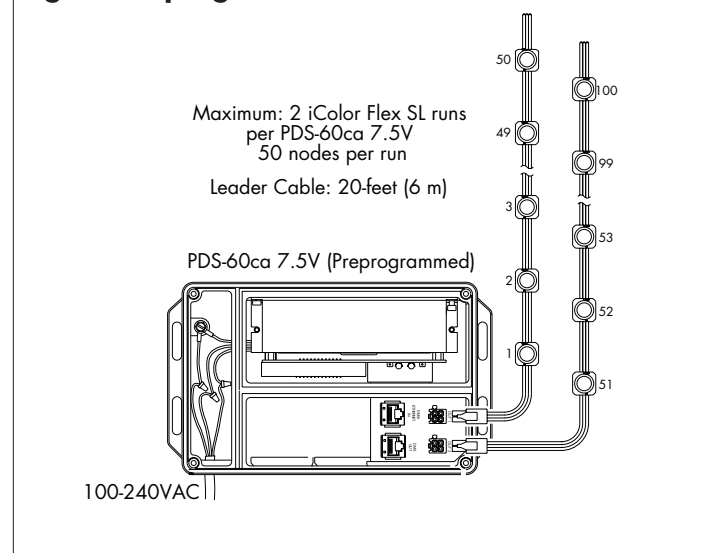


Fig. 8: DMX Control

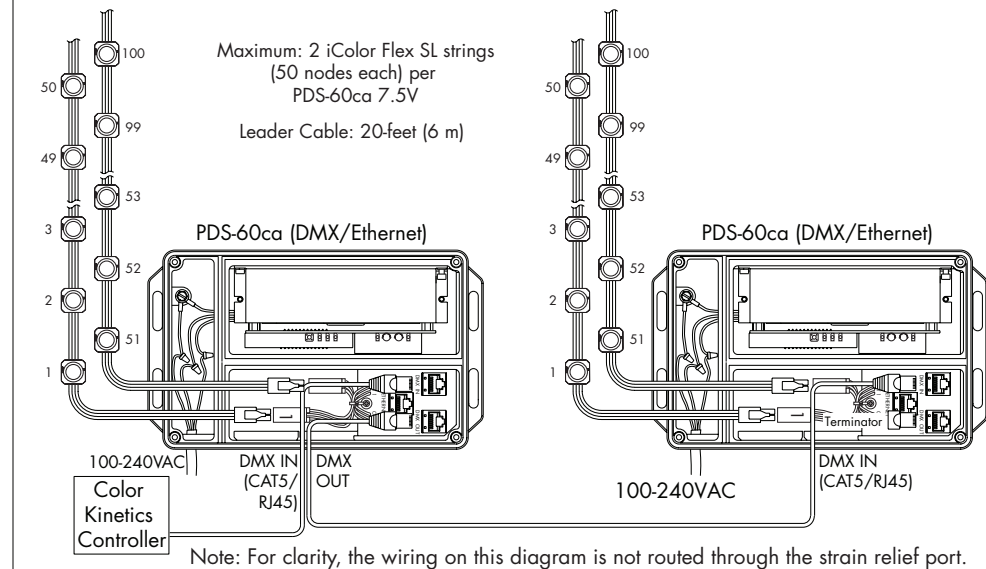
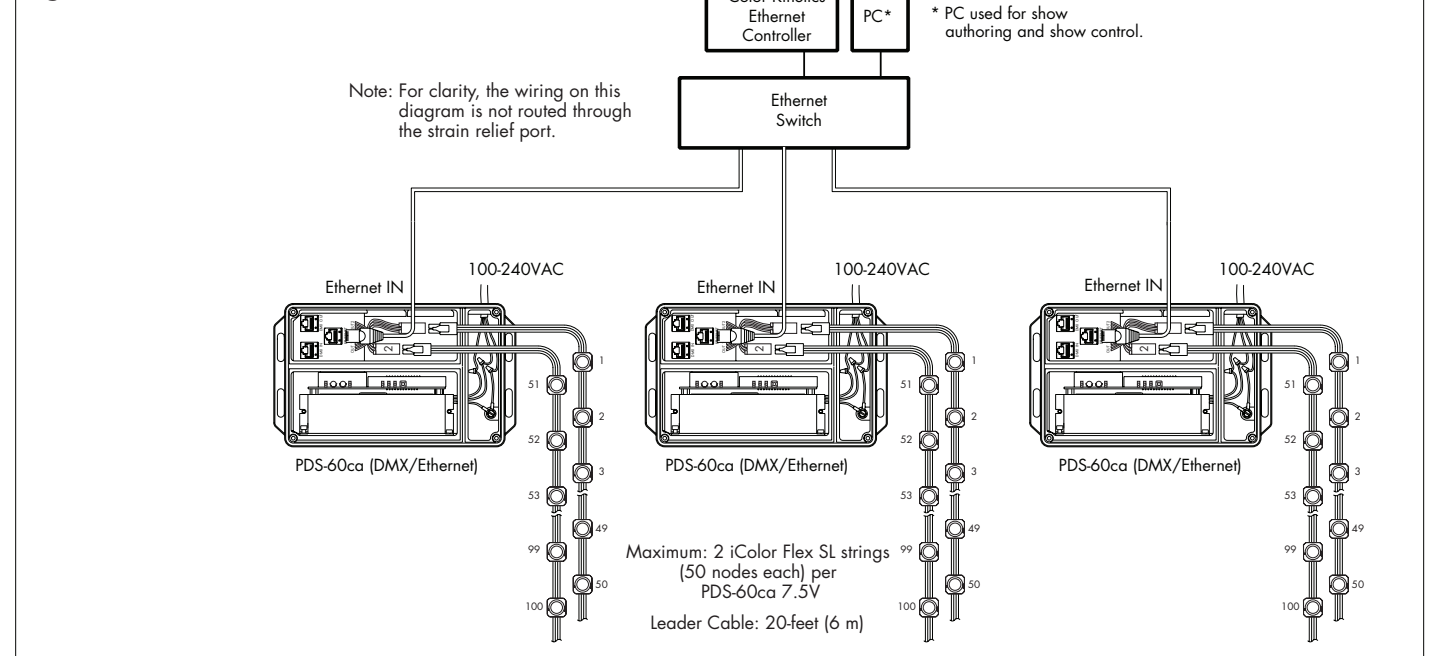


Fig. 9: Ethernet Control



LED SOURCE LIFE

In traditional lamp sources, lifetime is defined as the point at which 50% of the lamps fail. This is also termed Mean Time Between Failure [MTBF]. LEDs are semiconductor devices and have a much longer MTBF than conventional sources. However, MTBF is not the only consideration in determining useful life. Color Kinetics uses the concept of useful light output for rating source lifetimes. Like traditional sources, LED output degrades over time (lumen depreciation) and this is the metric for SSL lifetime.

LED lumen depreciation is affected by numerous environmental conditions such as ambient temperature, humidity, and ventilation. Lumen depreciation is also affected by means of control, thermal management, current levels, and a host of other electrical design considerations. Color Kinetics systems are expertly engineered to optimize LED life when used under normal operating conditions. Lumen depreciation information is based on LED manufacturers' source life data as well as other third party testing. Low temperatures and controlled effects have a beneficial effect on lumen depreciation. Overall system lifetime could vary substantially based on usage and the environment in which the system is installed.

Temperature and effects will affect lifetime. Color Kinetics rates product lifetime using lumen depreciation to 50% of original light output. When the fixture is running at room temperature using a color wash effect, the lifetime is in the range of 30,000-50,000 hours. This is based on LED manufacturers' test data. For more detailed information on source life, please see www.colorkinetics.com/lifetime.

WARRANTY

This product is sold pursuant to CK's Standard Terms and Conditions (the "T&Cs") which may be found at <http://colorkinetics.com/howtobuy/buy/terms> and which contain important provisions, including, among others, Limited Warranty, exclusions and limitations on CK's liability for damages, and restrictions on the remedies that are available to you.