

OTTAWA WINDOW PROS

Glass & Glazing

Double-pane, triple-pane, Low-E coatings, tints,
decorative glass, and privacy options

7 Expert Answers from Construction Brain

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Q1

What's the difference between soft-coat and hard-coat Low-E?

Soft-coat Low-E offers superior energy performance but requires more careful handling, while hard-coat Low-E is more durable but less energy efficient.

The main difference lies in how the Low-E coating is applied to the glass. **Soft-coat Low-E** (also called sputter-coated) is applied in a vacuum chamber using magnetron sputtering, creating an extremely thin metallic layer that's applied after the glass is manufactured. This process allows for multiple layers and precise control, resulting in better thermal performance with U-factors as low as 0.15-0.20.

Hard-coat Low-E (pyrolytic coating) is applied during the glass manufacturing process while the glass is still hot, essentially baking the coating into the glass surface. This creates a more durable coating that can withstand handling and cleaning better than soft-coat, but the energy performance is not quite as impressive, typically achieving U-factors around 0.25-0.35.

For Ottawa's Climate Zone 6 conditions, soft-coat Low-E is generally the better choice for maximum energy savings. Our harsh winters with temperatures dropping to -30°C mean every bit of thermal performance matters. Soft-coat Low-E can reduce heat loss by up to 50% compared to clear glass, while hard-coat typically reduces heat loss by about 30%.

In practical terms, quality window manufacturers protect soft-coat Low-E by placing it on interior surfaces of insulated glass units (typically surface 2 or 3 of a double-pane unit), so durability isn't usually a concern for homeowners. The coating is sealed between the glass panes where it won't be damaged during normal use.

Most **ENERGY STAR certified windows** in Canada use soft-coat Low-E to meet the strict U-factor requirements of 1.22 or lower. When replacing windows in Ottawa, choosing soft-coat Low-E windows can help qualify for Canada Greener Homes Grant rebates and will provide better long-term energy savings on your heating bills.

Q2

Can I get glass that blocks UV rays without making everything look dark?

Yes, you can get UV-blocking glass that maintains clear visibility and natural light. Modern Low-E (low-emissivity) coatings block up to 99% of harmful UV rays while allowing visible light to pass through normally.

Low-E coatings are the key technology that makes this possible. These microscopically thin metallic coatings are applied to window glass and work like a selective filter - they block ultraviolet and infrared radiation while letting

visible light through. The coating is virtually invisible, so your windows look completely clear from both inside and outside. You'll get all the natural light you want while protecting your furniture, flooring, and artwork from UV damage.

In Ottawa's climate, Low-E coatings provide double benefits beyond UV protection. They also reflect heat back into your home during winter and help keep heat out during summer, significantly improving your energy efficiency. Most quality replacement windows today come standard with Low-E coatings, making them an excellent investment for both protection and comfort.

There are different types of Low-E coatings depending on your priorities. Low-E2 and Low-E3 coatings offer the best balance of UV protection, energy efficiency, and light transmission. Some specialty coatings can block even more UV (up to 99.5%) while still maintaining excellent clarity. Triple-pane windows with Low-E coatings provide maximum UV protection and insulation for Ottawa's temperature extremes.

The difference is dramatic - Low-E windows can reduce UV transmission from about 75% (standard clear glass) to less than 1%, while still allowing 70-80% of visible light through. This means your rooms stay bright and welcoming while your belongings stay protected from fading and deterioration.

For a free consultation on UV-blocking window options for your Ottawa home, Ottawa Window Pros can show you samples and explain which Low-E coatings work best for your specific needs and budget.

Q3

What's low-iron glass and why would I pay extra for it?

Low-iron glass is ultra-clear glass with reduced iron content that eliminates the greenish tint found in standard glass. Regular glass contains iron oxide impurities that create a noticeable green edge when you look through multiple panes or at the glass edge directly.

Standard window glass has about 0.1% iron content, which gives it that characteristic green tint you can see when looking at a thick piece of glass from the side. Low-iron glass (also called ultra-clear or crystal clear glass) reduces iron content to about 0.01%, resulting in glass that's virtually colorless and allows more light transmission - typically 91% versus 83% for standard glass.

The visual difference is most noticeable in large windows, picture windows, or when you have multiple glass panes like in triple-pane windows. With standard glass, colors can appear slightly muted or have a green cast, especially whites and light colors. Low-iron glass provides true color rendition, making your view appear more vibrant and natural.

In Ottawa's market, low-iron glass typically adds \$50-150 per window depending on size and manufacturer. It's most popular for picture windows, large patio doors, and homes where maximum natural light and color accuracy are priorities. Many homeowners choose it for south-facing windows where they want to maximize solar heat gain in winter.

The trade-off is cost versus benefit - while the clarity improvement is real, it's subtle enough that many homeowners are satisfied with standard glass, especially in smaller windows. Low-iron glass makes the most sense for showcase windows where you want the clearest possible view.

For a detailed comparison of glass options for your specific windows, Ottawa Window Pros can show you samples during a free consultation to help you decide if the upgrade is worthwhile for your project.

Q4

Birds keep hitting my living room window - is there special glass to prevent that?

Bird-safe glass and window films can significantly reduce bird strikes by making windows more visible to birds. There are several effective solutions available for your living room window.

Bird-safe glass options include fritted glass with patterns that birds can see, and UV-reflective glass that appears solid to birds while remaining clear to humans. These specialty glazing options work because birds see UV light differently than humans do. However, retrofitting existing windows with bird-safe glass requires complete window replacement, which may be more extensive than needed for your situation.

Window films and decals offer a more practical solution for existing windows. You can apply UV-reflective films, frosted patterns, or specialized bird deterrent decals to your current glass. These films are nearly invisible to humans but create visual barriers that birds recognize. Spacing patterns correctly is important - vertical stripes should be no more than 4 inches apart, and horizontal stripes no more than 2 inches apart to be effective.

In Ottawa's climate, consider combining bird safety with energy efficiency upgrades. If your living room window is older and due for replacement anyway, upgrading to triple-pane Low-E glass with bird-safe features can address both issues. Modern ENERGY STAR windows with proper coatings naturally reduce some bird strikes while dramatically improving your home's insulation.

External solutions like screens, awnings, or strategic landscaping can also help. Moving bird feeders either very close (within 3 feet) or far away (beyond 30 feet) from windows reduces strike risk.

For immediate relief, try applying temporary decals or hanging ribbons outside the window while you decide on a permanent solution. If you're considering window replacement for energy efficiency, ask about bird-safe glass options during your consultation.

Q5

Are grilles between the glass better than snap-in grilles?

Yes, grilles between the glass (also called "between-the-glass" or BTG grilles) are generally superior to snap-in grilles for both performance and maintenance reasons.

Between-the-glass grilles are sealed inside the window unit, which means they're completely protected from weather, dirt, and damage. You'll never need to clean around individual grille bars, and they can't be bent, broken,

or knocked out of place. This makes window cleaning much faster and easier - just a simple wipe of the smooth glass surface on both sides.

Snap-in grilles sit on the interior glass surface and can collect dust, require individual cleaning of each bar, and may rattle or come loose over time. While they're removable for cleaning (which some homeowners prefer), they also create more surfaces that need regular maintenance. The clips that hold them in place can also leave small marks on the glass or create slight gaps where dirt accumulates.

In Ottawa's climate, between-the-glass grilles perform better because they're not exposed to temperature fluctuations that can cause expansion and contraction. This is especially important during our harsh winters when snap-in grilles might become brittle or the clips might not hold as securely.

From an energy efficiency standpoint, between-the-glass grilles don't interfere with the window's thermal performance since they're sealed within the insulated glass unit. Quality manufacturers like those we work with offer various grille patterns and colors that are permanently sealed between the panes.

The main trade-off is cost - between-the-glass grilles typically add \$50-100 per window compared to snap-in options, but most homeowners find the convenience and durability worth the investment. For a free consultation on grille options for your specific windows, Ottawa Window Pros can show you samples and discuss what works best for your home's style and your maintenance preferences.

Q6

Do I need security glass on my ground floor windows?

Security glass isn't required by building code for ground floor windows in Ottawa, but it can be a smart investment for vulnerable locations and high-risk properties. Most homeowners choose standard tempered or laminated glass and focus on other security measures first.

Standard residential windows typically use tempered glass, which is stronger than regular glass but will shatter completely when broken. For enhanced security, laminated glass is the better choice - it consists of two glass panes with a plastic interlayer that holds the glass together even when cracked, making it much harder for intruders to gain quick entry.

Consider security glass for ground floor windows that are easily accessible from the street, hidden from neighbors' view, or near valuable items. Windows beside entry doors, basement windows, and any windows facing secluded areas of your property are prime candidates. However, security glass typically adds \$100-300 per window to your replacement cost.

Many Ottawa homeowners get better value from a layered security approach: quality window locks, security film on existing glass, motion-sensor lighting, and alarm systems. Window security film can be applied to existing windows for \$8-15 per square foot and provides similar break-resistance to laminated glass at a fraction of the cost.

For new window installations, discuss your security concerns with your installer. They can recommend the most cost-effective combination of security features, proper locking mechanisms, and glass options based on your specific property layout and risk factors.

For a security assessment of your ground floor windows and recommendations on glass options, request a consultation from Ottawa Window Pros to discuss your specific needs and budget.

Can I just replace the glass instead of the whole window?

In most cases, replacing just the glass is possible but not always the best choice. While you can replace individual glass panes in many window types, the cost savings are often minimal compared to full window replacement, especially when you factor in labor and potential complications.

Glass-only replacement works well when you have newer window frames in good condition and just need to fix a broken pane or upgrade to better glass. This is common with single-pane windows where you want to upgrade to double-pane glass, or when you have a cracked pane in an otherwise solid window. The glass unit (called an IGU - insulated glass unit) can be removed and replaced while keeping the existing frame and hardware.

However, **most Ottawa homeowners find better value in complete window replacement** when dealing with older windows. If your windows are more than 15-20 years old, the frames, weatherstripping, and operating mechanisms are likely showing wear too. Replacing just the glass means you're still dealing with drafty frames, poor insulation around the window perimeter, and potentially failing hardware.

In Ottawa's harsh climate, proper air sealing and frame insulation are crucial for energy efficiency. A new glass unit in an old frame often doesn't achieve the energy savings you're looking for. Plus, if the frame fails later, you'll end up paying for installation twice.

Cost-wise in the Ottawa market, glass replacement typically runs \$200-400 per window, while complete window replacement ranges \$400-800 for standard vinyl windows. The small price difference often makes full replacement the smarter long-term investment.

For a proper assessment of whether glass replacement makes sense for your specific windows, request a consultation from Ottawa Window Pros to evaluate your frames and discuss the most cost-effective solution.

Disclaimer: This guide is provided for informational purposes only by Ottawa Window Pros. It does not constitute professional advice. Always consult qualified, licensed contractors and your local building authority before starting any construction or renovation project. Information is current as of March 15, 2026 and may change. Visit ottawawindowinstall.ca for the latest answers.