How can I check the color change in an alexandrite?

Two kinds of light are required to observe color change; daylight and incandescent light.

Natural daylight varies throughout the day and most stones will look more greenish or bluish in the morning compared to their appearance in the afternoon. Because of the variations in daylight many experts prefer to use artificial lighting which is more consistent. Daylight bulbs (5100K) and fluorescent or cool daylight tubes (6200K) are excellent for observing the daylight colors and will highlight the greenish hues in alexandrites. The lights should be held 5 or 6 inches above the stone to maximize the effect. Any unintentional ambient light should be obstructed so that the resulting light source is singular unmixed light source.

Penlights or fiber optic lights are the best sources for incandescent (3300K) lights. Penlights are most convenient and every gemologist or gem buyer will always carry one on any buying trip. To see the color change, hold the penlight 2 or 3 inches directly above the stone and perpendicular to the table. The reddish color should be immediately apparent in any alexandrite. Also try shining the light across the stone parallel to the girdle. At this orientation, the color change is normally even stronger. Fiber optic lights are convenient for office use because they don't require batteries and the light source is easy to focus on the stone in any direction at close range or from a distance. Regular incandescent light bulbs are harder to work with because they are too hot and often too far away from the stone to be strong enough.

Gem labs use a special light box with standardized lights to check color change. The box will maximize the observable color change by providing a pure daylight or incandescent light source and obstructing any unintentional ambient light.