

## Light Reflectance Value (LRV) – What You Need to Know

Michael Jackson's hit, 'Black or White', got it right when it comes to the effect of colours bouncing off the walls. An insight into the Light Reflectance Value (LRV) of colours for interiors can make all the difference between binding or soothing. Denise Turner, our resident colour editor, lets us in on the skinny of choosing the right shade of colour.

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Have you ever noticed these letters "LRV" combined with numbers on your paint chips and wondered what they were? Allow me to explain.

LRV is short for **Light Reflectance Value**. LRV numbers can be found in various places, depending on the paint manufacturer's preference. Some are on the back of the paint chip; some are on the front, next to the name, and some are on the index in the back of the tin deck.

- **Lightness** - refers to a colour's LRV (Light Reflectance Value). The LRV numbers slide on a scale from 0% to 100%. Zero being complete black and pure white being 100%.
- **Value** - refers to a colour's relative lightness or darkness. For example, pure white is at the top of the scale, where black is at the bottom. When white is added to colour (tinted) it becomes a higher value of colour.



Credit: LRV scale provided by ICI Paint.

### LRV Users & Uses

Anyone who orders or mixes a bucket of paint should be aware of LRV, but primarily architects, colour consultants and interior designers use LRV data for colour planning and specifying.

Being a colourist who specifies truck-loads of paint for architects, contractors and consumers, I'm seeing more paint specifications clearly defining the maximum or minimum LRV levels. The basis behind this is primarily dictated by LEED requirements. LEED, or Leadership in Energy and Environmental Design, is an internationally-recognized green building certification system, developed by the U.S. Green Building Council.

Additionally, an interior wall colour with a higher LRV can support lighting plans as it helps to disperse artificial light throughout the space, consequently reducing the standard number of lighting fixtures required in an environment.



### LRV Interiors

Careful planning must be taken into consideration for interiors when choosing the shade. For example, too high an LRV can cause eyestrain reflecting from off work surfaces. However, a paint colour with a high LRV in a storage area, where people infrequently visit can reflect more light without adding more light fixtures.

We're all familiar with Sir Isaac Newton and how he used a glass prism in the late 1600s to divide white rays of sunlight, into fanned coloured wavelengths. He referred to this as the "spectrum." Newton's theory was that light was composed of particles and that it was necessary for them to connect the property of light waves, in order to explain light refraction.

In some of the latest type of paints, Newton's theory is combined with state-of-the-art paint technology with the result that saves the planet and your money at the same time. What some formulations include are mica pigments that refract and bounce light waves back from the light source, making the space brighter. Hence, you're able to reduce the amount of light fixtures and kilowatts in your environment. Here's another added bonus.

### LRV & Ageing Eye

Have you ever visited an elderly friend and wondered why their curtains were drawn shut in the middle of the day? This could possibly be the reason: glare is blinding to seniors; which is why many of them live in the dark. When an interior is painted in a high LRV tone, such as a pure white, it can be unbearable and especially painful if the high LRV surfaces are in a high-gloss finish. Additionally seniors need three times as much light as someone in their twenties and thirties.

Ultimately, when it comes to choosing the right LRV for interiors, it is important to consider the function of the space, the people who will be living in them and of course, the green impact, on both your wallet and the planet.

01: Low LRV absorbs more light and energy, making heat retention and escalating utility bills a problem in tropical climates.

02: LRV of a tone can complement the lighting plans of an interior space.