



Improving LPR Accuracy: Outdoor Configuration Guide & Case Studies

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Applied to

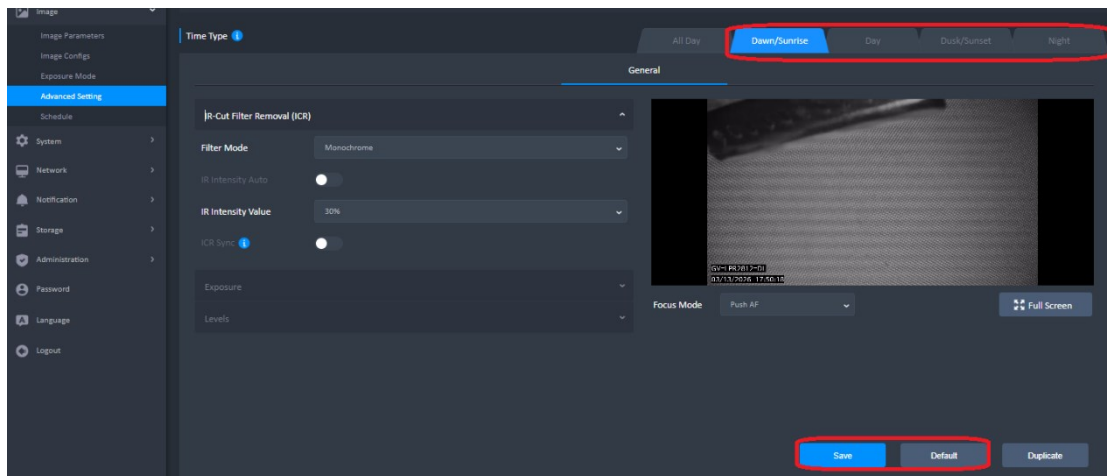
GV-LPR2812-DL

Optical Settings for Outdoor Environments

If your camera is installed outdoors, it will likely experience varying lighting conditions throughout the day. In addition to the standard default optical settings (All Day mode), the camera also provides recommended optical parameters for four specific time periods: **Dawn/Sunrise**, **Day**, **Dusk/Sunset**, and **Night**.

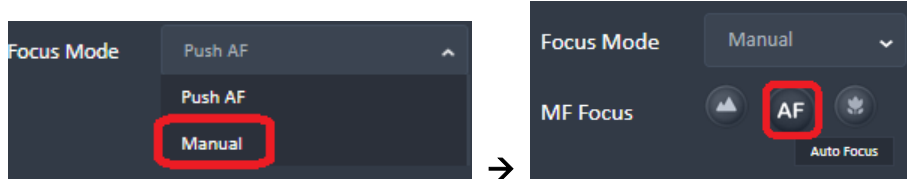
Follow the steps below to enable these four specific parameters and configure a schedule to apply them at the appropriate times, ensuring the best image quality for your outdoor environment.

1. In the left menu, select **Image > Advanced Setting**.
2. To enable four specific optical parameters:





- A. Select the **Dawn/Sunrise** tab.
- B. To apply the recommended parameters, click **Default**.
- C. To adjust the focus, select **Focus Mode > Manual > Auto Focus**.



- D. Click **Save** to apply the settings.
- E. Select another tab (**Day, Dusk/Sunset, and Night**) and follow Steps A ~ B to enable their recommended parameters one by one.

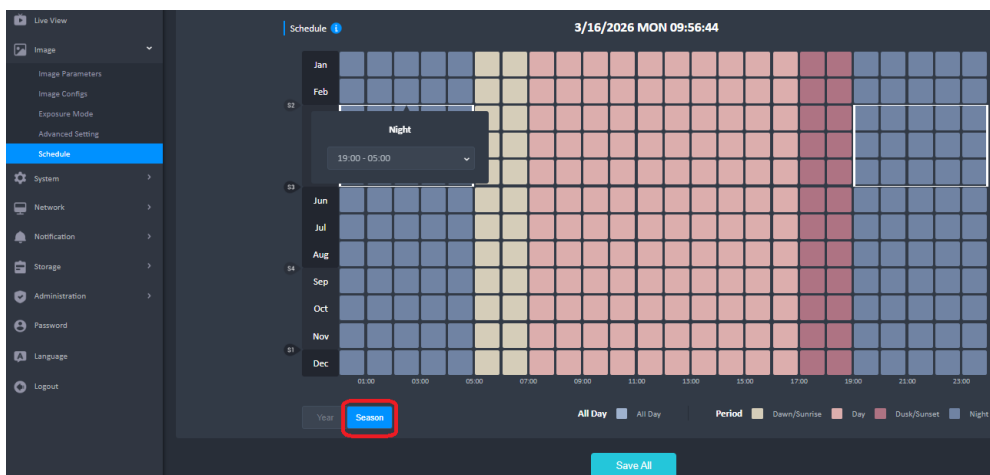
Note for Step C:

1. If Auto Focus results are imprecise, use **Macro** or **Infinity** mode to manually adjust image clarity.



2. Since this model is non-parfocal (day and night focus differ), users must manually perform a focus adjustment for each time period to ensure the image remains sharp and clear.

3. To configure time periods:



- A. Click **Image > Schedule**.
- B. Select **Season**.
- C. Click on period bars to adjust the time period if necessary.
- D. Click **Save All**.

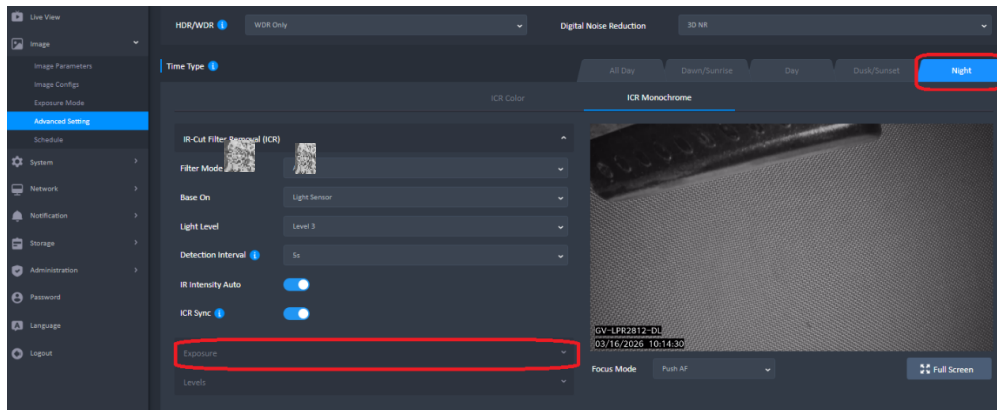


Case Studies

Case 1: Nighttime – Overexposed license plate with no supplemental lighting (Night Mode)

- **Issue:** The license plate is overexposed and unreadable in low-light conditions.
- **Current Optical Setting:** Night Mode

How to adjust optical settings:



1. Go to **Image > Advanced Setting > Night** Tab.
2. Click **Exposure**.
3. Set the **Min. Iris** to **f/2.79** and the **Max. Iris** to **f/7.88**.
4. Set the **Max. Gain** to **60%**.
5. Set the **EV Value** (Exposure Value) to **-1**.
6. Fine-tuning:
 - If the plate remains overexposed, decrease the **Max. Gain**.
 - If the overall image is too dark, increase the **Max. Gain** incrementally.



Before Adjustment – Night Mode	
	
After Adjustment – Night Mode	
	

Case 2: Nighttime – Overexposed license plate with no supplemental lighting (All Day Mode)

- **Issue:** The license plate is overexposed and unreadable in low-light conditions.
- **Current Optical Setting:** All Day Mode
- **Primary Solution:** Add supplemental lighting.

How to adjust optical settings:

1. Go to **Image > Advanced Setting > All Day** Tab.
2. Click **Exposure**.
3. Set the **Min. Iris** to **f/2.79** and the **Max. Iris** to **f/7.88**.
4. Set the **Max. Gain** to **60%**.
5. Set the **EV Value** (Exposure Value) to **-1**.
6. Fine-tuning:
 - If the plate remains overexposed, decrease the **Max. Gain**.
 - If the overall image is too dark, increase the **Max. Gain** incrementally.



Before Adjustment – All Day Mode



After Adjustment – All Day Mode

